

Biota Report

Tesoro del Valle Phases B and C Revised VTTM 51644-1

Significant Ecological Area (SEA) No. 20 Santa Clara River SEA

Project Number3: 92-074-(5)

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1.0 **INTRODUCTION**

This Biota Report is intended to provide the County of Los Angeles Significant Ecological Area Technical Advisory Committee (SEATAC) with a thorough analysis of the potential impacts on biological resources within Significant Ecological Area (SEA) No. 20 resulting from implementation of the proposed project. This report also incorporates data and analyses sufficient to satisfy the biological resource technical requirements of the California Environmental Quality Act (CEQA) for the purpose of acquiring an SEA Conditional Use Permit. The proposed project includes Phases B and C of the Tesoro del Valle Project Site (herein referred to as the “project site”), as shown on Vesting Tentative Tract Map 51644-1.

The Project Applicant and Biological Consultant responsible for providing this Biota Report are listed below:

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1.1 **PROJECT LOCATION AND DESCRIPTION**

The project site is located north of the City of Santa Clarita and east of Interstate (I) 5 in an unincorporated area of the County of Los Angeles (Exhibit 1). The 1,271.4-acre project site is located directly south of the Angeles National Forest's Saugus Ranger District, north of Copper Hill Drive and west of San Francisquito Canyon Road. The northeastern corner of the project site (Phase C) includes a small portion of San Francisquito Canyon, which the County of Los Angeles has designated as SEA No. 20, also known as the Santa Clara River SEA. The western portion of the project site includes the upper reach of Wayside Canyon, two tributaries of Tapia Canyon, and an unnamed blue-line drainage. Castaic Lake is located approximately two miles to the northwest.

The project site is located near the boundary of the U.S. Geological Survey's (USGS') 7.5-minute Newhall quadrangle, within Township 5 North, Range 16 West and includes portions of Sections 21, 22, 27, 28, 32, and 33 (Exhibit 2). Assessor Parcel Numbers (APNs) that constitute the project site include 3244-160-017 through 3244-160-025; 3244-161-001 through 3244-161-023; 3244-162-001 through 3244-162-006; 3244-163-003 through 3244-163-007; and 3244-164-001 through 3244-164-009. A list of parcels and acreages is provided in Appendix A.

The proposed project involves the buildout of Phases B and C of the Tesoro del Valle project site. The project's grading footprint encompasses 393.60 acres on which 820 homes would be constructed, consisting of 456 single-family detached homes and 364 age-qualified senior homes. Additionally, the project consists of the development of private parks and recreation areas; public and private trails; public and private open space; public and private roadways; and utility

infrastructure. Project construction will involve mass grading of approximately 9.2 million cubic yards of soil, which will be balanced on site.

1.2 PROJECT BACKGROUND

In 1995, the Tesoro del Valle project Environmental Impact Report (EIR) (SCH 9302107) was made available for public review. At that time, the project consisted of a 1,795-acre, mixed-use community composed of approximately 3,000 residential dwelling units and 5.6 acres of commercial and supporting infrastructure.

Prior to the preparation of this EIR, a Biological Constraints Analysis was submitted to the County of Los Angeles in August 1992 and discussed during a September 14, 1992, SEATAC meeting. After this meeting, a Biota Report was submitted to SEATAC and discussed at three meetings on February 1, April 5, and May 3, 1993.

After the 1995 EIR was released publicly, the project underwent several design modifications. The project was ultimately approved by the County of Los Angeles Board of Supervisors on May 18, 1999. The project included 1,791 dwelling units (including 898 single-family lots and 893 residential condominium units), approximately 6.2 acres of commercial use, 61.8 acres of active parks, a 13.9-acre recreation center, an elementary school site, the Tesoro Historical Site (Harry Carey Ranch), and riding/hiking/equestrian trails. Approximately 621.5 acres (35 percent) of the site was designated as undeveloped natural open space. Associated approvals included General Plan Amendment 92-074-(5), Zone Change Case No. 92-074-(5), Conditional Use Permit No. 92-074-(5), Oak Tree Permit No. 92-074-(5), and Vesting Tentative Tract Map No. 51644.

At that time, the Tesoro del Valle Project consisted of four phases (A through D). Construction of Phase A was initiated in 2000 and was completed in 2005. Phase D was originally proposed to include sporting facilities adjacent to San Francisquito Creek. This area was outside SEA boundaries at the time of the 1999 EIR, but is now within the boundaries of the currently identified SEA which was revised in the Los Angeles County 2015 General Plan Update. Phase D has subsequently been removed from the overall project, and no impacts would occur as part of this project.

The current project would implement a proposed revision to Vesting Tentative Tract Map (VTTM) 51644, which includes only the designated areas for Phases B and C. Phase A (currently built out) and Phase D are not a part of this revised tract map. As Lead Agency, the County of Los Angeles has reviewed the need for additional environmental documentation and the ability to supplement the previous analysis or tier off of the 1999 EIR and determined that a Supplemental EIR (SEIR) should be prepared. The purpose of the Tesoro del Valle Phases B and C SEIR is to address minor additions and changes that would update information in the 1999 EIR to reflect current environmental conditions and thereby make the previous EIR adequate for continued use of the project.

In regards to Biological Resources, the currently proposed project is in compliance with the 1999 EIR as summarized below:

- Project grading limits have declined from approximately 718 acres to 393.6 acres, which are clustered near the southern portion of the site near Phase A (see Exhibit 3).
- Oak tree impacts have been reduced from 34 trees approved for removal per Oak Tree Permit No. 92-074-(5) versus 11 oak trees proposed with the current project.

- ~~Potential-I~~Impacts to SEA 20 and special status fish species that potentially occur are eliminated with the removal of Phase D from the development.
- Reduced impacts to Wayside Canyon in the southwestern portion of the site has reduced proposed impacts to holly-leaf cherry woodland from 11.24 acres to approximately 0.12 acre.

1.3 PERMITS AND APPROVALS REQUESTED

Required approvals for the proposed project include the following:

- Revisions to Vesting Tentative Tract Map No. 51644;
- Revisions to Conditional Use Permit No. 92-074(5) (On-Site Grading, Significant Ecological Area, Hillside Management, Density Controlled Development, Haul Route Permit for Off-Site Grading);
- A Los Angeles County Grading Permit;
- Revisions to Oak Tree Permit No. 92-074(5) and No. 2010-00029;
- A Federal Clean Water Act (CWA) Section 404 Permit;
- A Regional Water Quality Control Board (RWQCB) Section 401 CWA Water Quality Certification; and
- A California Fish and Game Code Section 1602 Streambed Alteration Agreement.

1.4 SUMMARY OF SIGNIFICANT IMPACTS

Impacts of the proposed project are described in Section 6. A summary of the potential impacts deemed to be significant prior to mitigation are as follows: loss of special status vegetation types (coast live oak woodland, holly-leaf cherry woodland, mixed chaparral–alluvial scrub/annual grassland, sage scrub, sage scrub/annual grassland, and southern riparian scrub); loss of populations of special status plant species; potential loss of active nests of common and special status bird species; potential disturbance to and/or loss of special status wildlife species; loss of protected oaks; and loss of streambed resources under the jurisdiction of the U.S. Army Corps of Engineers (USACE); the Los Angeles RWQCB; and California Department of Fish and Wildlife (CDFW). Indirect impacts would occur with respect to increased light and glare; increased landscaping irrigation and reduced storm water runoff; increased populations of non-native species; increased human and domestic animal presence; and erosion, siltation, and fugitive dust resulting from grading and construction activities. The proposed project would also contribute to an unavoidable significant cumulative impact related to the loss of ~~potential-suitable~~ habitat for plant and wildlife species. Unavoidable significant impacts would occur with the increased populations of non-native and/or urban-adapted wildlife species and increased human and domestic animal presence. The remaining significant project-specific direct and indirect impacts could be mitigated to a less than significant level with implementation of the mitigation measures identified in Section 7.

2.0 **SETTING**

2.1 **REGIONAL SETTING**

The project site is located in the Santa Clarita Valley. The valley is generally flat with gently rolling hills that have an average elevation of 1,200 to 1,400 feet above mean sea level (msl), with the canyons surrounding the valley ranging from 1,500 to 2,500 feet above msl. It is bound by the Santa Susana Mountains to the south, the San Gabriel Mountains to the east, the Piru Mountains to the west, and the Sierra Pelona Mountains to the north. The mountain ranges that surround the valley form the dominant visual features of the area. The valley floor is crossed by several watercourses, the largest being the Santa Clara River, which is located approximately four miles south of the project site. Most of the watercourses in this area are usually dry, maintaining surface flow only during the rainy months. However, the Santa Clara River in this area maintains surface flow year-round. A prominent topographic feature of the valley is its north-south-trending canyons.

Land uses in the surrounding area include agriculture, ranch-style homes, residential development projects, and open space. The areas near the project site, in particular the City of Santa Clarita and along the I-5 corridor, have experienced increased urbanization, continued growth, and the expansion of associated infrastructure and services. A series of site photographs are provided as Appendix B.

2.2 **SIGNIFICANT ECOLOGICAL AREA**

The *County of Los Angeles General Plan* originally characterized SEAs as areas that contain unique, dwindling, or other rare plant and animal resources that need to be more specifically studied for the purpose of public education, research, and other non-disruptive outdoor uses (England and Nelson 1976). Thus, the SEA designation does not prohibit development of land, but signals that further study is required. San Francisquito Canyon is located east of the project site with the canyon passing through the northeast corner of the Phase C portion of the site (Exhibit 4). San Francisquito Canyon was previously identified as SEA No. 19, but has since been incorporated as part of the Santa Clara River SEA (i.e., No. 20), pursuant to the Santa Clarita Valley Area Plan Update of 2011 and the Los Angeles County General Plan Update of 2015.

The main purpose for establishing the San Francisquito Canyon SEA was to ensure protection of occupied habitat for the unarmored threespine stickleback (*Gasterosteus aculeatus williamsonii*), which requires clean, free-flowing perennial streams and ponds surrounded by natural vegetation. England and Nelson (1976) recognized the importance of the intermittent portions of San Francisquito Canyon Creek that provide connections between upstream and downstream habitat during the wet season. In particular, the function of the natural vegetation along the intermittent portions of the stream in controlling siltation of downstream habitat was noted.

2.3 **SITE HISTORY**

Over its recent history, the project site has been subject to two principal impacts: livestock grazing and fire. Part of the project site was included in Rancho San Francisco, deeded to Don Antonio del Valle in 1839, which produced both crops and livestock (Cultural Resource Management Services and Leslie Heumann and Associates 1993). Rancho San Francisco was purchased by Henry Newhall in 1875 and it is likely that the site was subject to livestock grazing during this period as well. In 1913, Harry Carey and his wife purchased a portion of Rancho San Francisco that includes the project site and owned the property until 1945 (Cultural Resource Management Services and Leslie Heumann and Associates 1993). The Careys raised beef cattle, dairy cows, sheep, hogs, and chickens as owners of the ranch. Information on more recent land uses of the property is not available.

Fires have also regularly affected the project site. Wildfires burned the project site in 1932 and 1942 (Cultural Resource Management Services and Leslie Heumann and Associates 1993). Most recently, the 2002 Copper Fire burned much of the project site (Ragland and Ritsch. 2002). The reduced shrub cover from this fire stimulated the germination and coverage of non-native grasses, though native shrubs have gradually recovered in recent years to reduce the presence of these grasses.

2.4 GEOLOGY AND TOPOGRAPHY

The project site is currently vacant and contains natural open space with hillsides, ridgelines, and drainages within and adjacent to the project site. Several dirt roads and firebreaks also traverse the project site. Topography consists of steep to moderately steep terrain with on-site elevations ranging from approximately 1,550 feet to 1,900 feet above msl. A ridgeline runs from the northeast to the southwest of the project site, dividing San Francisquito Canyon on the east from a series of smaller canyons to the west. Surface water to the west of the central ridgeline primarily flows into tributaries of Wayside and Tapia Canyons which, in turn, drain to Castaic Creek and eventually discharge into the Santa Clara River. Runoff on the eastern half of the project site is divided by the central ridgeline and drains southeasterly into tributaries of San Francisquito Creek, which crosses the northeastern portion of the project site and continues to flow south adjacent to the site's eastern side. San Francisquito Creek flows downstream via natural channels to the Santa Clara River, which is located approximately four miles south of the project site.

2.5 SOIL SERIES AND CHARACTERISTICS

Soil types on the site include Castaic-Balcom silty clay loams, Castaic and Saugus soils, Hanford sandy loam, Metz loamy sand, sandy alluvial, Saugus loam, and Yolo loam (USDA 1969). These are fairly deep soils with classifications that range from well drained to excessively drained. Table 1 describes the major on-site soil types in more detail. Exhibit 5 illustrates the extent of the various soil types on the project site.

TABLE 1
SOIL TYPES AND THEIR HYDROLOGICAL CHARACTERISTICS

Soil Type	Soil Characteristics*	Hydric/ Non-Hydric? (NRCS)	Associated Vegetation Types On Site
Castaic-Balcom silty clay loams (CmE, CmF)	<ul style="list-style-type: none"> Well drained soils formed in residuum weathered from shale, sandstone, and mudstone. Runoff is very high. Depth to water table is more than 80 inches. Moderately slow permeability. 	non-hydric	chamise chaparral, elderberry scrub
Castaic and Saugus soils (CnG3)	<ul style="list-style-type: none"> Well drained soils formed in residuum weathered from shale, sandstone, and mudstone. Runoff is very high. Depth to water table is more than 80 inches. Moderately slow permeability. 	non-hydric	sage scrub
Hanford sandy loam (HcC)	<ul style="list-style-type: none"> Well drained soils formed by weathered sedimentary rock. Runoff is low. Depth to water table is more than 80 inches. Moderately rapid permeability. 	non-hydric	holly-leaf cherry woodland
Metz sandy loam (MfC)	<ul style="list-style-type: none"> Somewhat excessively drained soils that formed in alluvial material from mixed, but dominantly sedimentary rocks. Runoff is low. Depth to water table is more than 80 inches. Moderately rapid permeability. 	non-hydric	alluvial scrub, mixed chaparral, oak woodlands
Sandy alluvial (SA)	<ul style="list-style-type: none"> Well-drained soils formed in mixed alluvium (alluvial fans and floodplains). Runoff is negligible to medium. Moderately rapid permeability. 	non-hydric	alluvial scrub
Saugus loam (ScE, ScF, ScF2)	<ul style="list-style-type: none"> Well-drained soils on dissected terraces and foothills. Runoff is medium to rapid. Moderate permeability. 	non-hydric	chamise chaparral, sage scrub
Yolo loam (YoC)	<ul style="list-style-type: none"> Well soils that are fine-silty, mixed, nonacid, thermic family of Mollic Xerofluvents. Runoff is slow to medium. Permeability is moderate. 	non-hydric	alluvial scrub
NRCS: Natural Resources Conservation Service * Descriptive terms are defined as standard terms in SCS soil surveys. Source: USDA 1969			

3.0 **SURVEY METHODS AND GENERAL BIOTA SURVEYS**

3.1 **LITERATURE REVIEW**

In order to evaluate the natural resources found on the project site, literature searches and database reviews were conducted. Available literature describing the biology, geology, soils, and hydrologic resources in the region was examined prior to field surveys. At a minimum, the literature examined includes the following:

- *Draft Environmental Impact Report for Tesoro del Valle Project* (Los Angeles County Project No. 92074, Tract No. 51644, General Plan Amendment, Zone Change, Conditional Use Permit, Oak Tree Permit, SCH No. 1988071329), County of Los Angeles Department of Regional Planning, certified in 1999.
- National List of Plant Species that occur in California, Region 0 – California (Reed 1988).
- CDFW's California Natural Diversity Database (CNDDDB) Rarefind report for the USGS Newhall, Mint Canyon, San Fernando, Oat Mountain, Simi Valley East, Val Verde, Whitaker Peak, Green Valley, and Warm Springs Mountain 7.5-minute topographic quadrangle maps (CDFW 2016a).
- Los Angeles Audubon Society's Breeding Bird Atlas for Los Angeles County (Allen et al 2016).
- California Native Plant Society's (CNPS) Locational Inventory of Rare and Endangered Vascular Plants of California for the USGS Newhall, Mint Canyon, San Fernando, Oat Mountain, Simi Valley East, Val Verde, Whitaker Peak, Green Valley, and Warm Springs Mountain 7.5-minute topographic quadrangle maps.
- CDFW's Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2016b).
- U.S. Department of Agriculture, Natural Resources Conservation Service (2015) Los Angeles County, California Soil Surveys.
- County of Los Angeles Significant Ecological Area Study, prepared for the County of Los Angeles Department of Regional Planning and Environmental Systems Research Institute (England and Nelson Environmental Consultants 1976).
- County of Los Angeles Department of Regional Planning's Proposed Significant Ecological Area Update Study (County of Los Angeles 2005).
- Literature specific to descriptions of the habitat, vegetation types, and special status species occurring in Los Angeles County.
- Aerial photographs from 2006, 2011, and 2015.
- U.S. Fish and Wildlife Service's (USFWS') National Wetland Inventory Map (NWI), Newhall Topographic Quadrangle; and
- USGS Newhall Topographic Quadrangle.

3.2 **FIELD SURVEYS**

Biological field surveys on the project site have been conducted by several biologists. Psomas (previously BonTerra Consulting) biologists have conducted vegetation mapping surveys; performed focused botanical surveys; and conducted focused surveys for special status fish species, western spadefoot (*Spea hammondi*), coastal California gnatcatcher (*Poliophtila californica californica*), and burrowing owl (*Athene cunicularia*). Other surveys recently conducted

include a delineation of jurisdictional waters and an oak tree survey. Field survey data were collected by qualified biologists, typically working in teams. Habitat and species observations were noted on data sheets, aerial photographs, and maps. Specific information concerning special status species observations was recorded on maps and appropriate data sheets. A summary of field surveys, surveyors, and dates is provided in Appendix C.

3.3 VEGETATION MAPPING AND BOTANICAL SURVEYS

Special status plant surveys have been conducted on three occasions to evaluate the presence or absence of special status plant species on the project site. The most recent botanical survey was conducted in 2016, while previous surveys were conducted in 2005 and 2011. The 2016 plant surveys were performed by Biologists Jonathan Aguayo, Trevor Bristle, Ian Cain, Katie Gallagher, Sandy Leatherman, Cristhian Mace, Steve Norton, Courtney Rose, Allison Rudalevige, Sarah Thomas, Jonas Winbolt, and Jordan Zylstra on April 21, 26, and 27; May 3; June 6, 10, and 13; and September 1, 2016. Plant species were identified in the field or collected for later identification. All plant species observed were recorded in field notes and are included in Table D-1 of Appendix D.

Vegetation mapping was originally performed in 2005 by BonTerra Consulting Biologists Pam DeVries and Andrea Edwards. Ms. DeVries and Ms. Edwards updated the 2005 vegetation map for the entire survey area on April 13 and 22, 2011. Nomenclature for vegetation types generally follows that of *The Vegetation Classification and Mapping Program: List of California Terrestrial Natural Communities Recognized by the Natural Diversity Data Base* (CDFG 2003). Where appropriate, vegetation type names are cross-referenced to the corresponding *A Manual of California Vegetation* association name (Sawyer et al. 2009). Vegetation was mapped in the field on an aerial photograph at a scale of 1 inch equals 200 feet (1" = 200').

All portions of the project site containing native habitats were reviewed during plant surveys to identify ~~potentially~~ suitable habitat for special status species. Prior to conducting the field surveys, reference populations were checked for species that have the potential to occur on the project site. These reference surveys were conducted to confirm the flowering status and to verify that the surveys on the project site were conducted during the appropriate blooming period. The location of each special status plant population found on the project site was mapped using a Garmin Geko Global Positioning System (GPS) unit. Voucher specimens were collected and deposited in the Rancho Santa Ana Botanic Garden to ensure accuracy in identification.

In conformance with current protocols created by the California Department of Fish and Wildlife (CDFW) (CDFG 2009) and the California Native Plant Society (CNPS) (CNPS 2001), all surveys (1) were conducted during flowering seasons for the special status plants known from the area; (2) were floristic in nature; (3) were consistent with conservation ethics; (4) systematically covered all habitat types on the project site; and (5) were well-documented by the survey reports (BonTerra Consulting 2011; Psomas 2016c) and by voucher specimens deposited at Rancho Santa Ana Botanic Garden. A detailed description of the survey can be found in the plant survey report provided in Appendix E.

3.4 WILDLIFE SURVEYS

General wildlife observations were noted during all 2005, 2008, and 2015 focused surveys. All observed wildlife species were recorded in field notes and are listed in Table D-2 of Appendix D.

During the surveys, each habitat type was evaluated for its potential to support special status species that are known or expected to occur in the region. Active searches for reptiles and amphibians included lifting, overturning, and carefully replacing rocks and debris. Birds were

identified by visual and auditory recognition. Surveys for mammals were conducted during the day and included searching for and identifying diagnostic sign, including scat, footprints, scratch-outs, dust bowls, burrows, and trails. Taxonomy and nomenclature for wildlife generally follows Stebbins (2003) for amphibians and reptiles, the American Ornithologists' Union (2016) for birds, and Baker et al. (2003) for mammals.

3.5 FOCUSED WILDLIFE SURVEYS

Focused wildlife surveys of the project site were conducted in 2005, 2007, 2008, and 2015 for several special status wildlife species. These survey efforts are documented in the reports provided in Appendices E through K and are discussed in greater detail below.

3.5.1 Special Status Fish Species

Focused surveys for special status fish species were conducted in 2005. The project site was surveyed on June 24, 2005, by Dr. Thomas Haglund and Dr. Jonathan Baskin from San Marino Environmental Associates. The surveys focused on three species that occur in the upper Santa Clara River drainage, specifically San Francisquito Canyon, and included the unarmored threespine stickleback, Santa Ana sucker (*Catostomus santaanae*), and arroyo chub (*Gila orcutti*). All surveys were led by Dr. Haglund and Dr. Baskin.

San Francisquito Canyon was surveyed within the boundaries of the project site. A 12-foot by 6-foot, $\frac{1}{8}$ -inch, mesh nylon minnow seine was used. In some small habitats, aquarium dipnets were used, particularly to sample fry or recently transformed fry. A detailed account of the survey methods and results can be found in Appendix F.

Since conditions within San Francisquito Canyon have not substantially changed since the 2005 surveys were conducted, no additional surveys have been conducted. These fish species are assumed to likely occur in portions of the canyon when surface water is present.

3.5.2 Western Spadefoot

Focused surveys for the western spadefoot were conducted on the project site by BonTerra Consulting Biologists Dr. Mike Robson, Sam Stewart, and Jeff Wheeler. Surveys were conducted on April 1, 14, and 28 and May 2, 2005. Focused surveys for the presence or absence of the western spadefoot were conducted by methodically searching all suitable ~~or potentially suitable~~ habitat for all life stages (i.e., adults, metamorphs, larvae, and egg masses). Surveys for larvae and egg masses were conducted during daylight hours and involved close inspection of any pooled or ponded water. Any egg masses or larvae observed were identified to species in the field.

Surveys for adults and metamorphs were conducted on four dates with appropriate environmental conditions conducive to the activity patterns for this species. Generally, these conditions are nighttime temperatures in excess of 50 degrees Fahrenheit (°F) and heavy rain (i.e., in excess of 1 inch in 24 hours). Adults are also primarily nocturnal. If the preferred environmental conditions were not met, surveys were conducted under conditions that were determined to be the most favorable for the species. These surveys were initiated approximately one hour prior to sunset and continued to two hours after sunset. Any amphibians encountered were identified in the field to species. All surveys were conducted under suitable weather conditions. A detailed account of the survey methods and results can be found in the western spadefoot survey report included in Appendix G.

The above-referenced surveys were conducted in the spring following the El Niño winter of 2004-2005. Precipitation levels in the following years have not provided sufficient water for the basins surveyed previously to sustain western spadefoot breeding. Pre-construction surveys will be performed to determine if western spadefoot is present in the locations where they were previously detected. If breeding activity is detected, a relocation plan will be developed for the purpose of moving egg masses and/or tadpoles to replacement ponds.

3.5.3 Coastal California Gnatcatcher

Surveys for the coastal California gnatcatcher were conducted during the breeding seasons in 2005, 2008, and 2015. The current USFWS coastal California gnatcatcher survey protocol, for lands not in a Natural Community Conservation Planning area, recommends six visits to all potentially occupied habitat areas during the morning hours for surveys conducted entirely within the breeding season (USFWS 1997). Following the USFWS protocols for the species in 2005, Mike Couffer (USFWS Permit No. TE-782703-5) and Dana Kamada (USFWS Permit No. TE-799568-5) conducted 6 focused survey visits to all habitat potentially occupied by the gnatcatcher, covering no more than 80 acres of ~~potentially~~ suitable habitat per day. Two field visits per week were required to thoroughly inspect all on-site vegetation that could support the gnatcatcher. Because all surveys were conducted within the gnatcatcher breeding season (March 15 through June 30), survey visits to each potentially occupied habitat polygon were separated by a week or more. The project site was separated into two polygons and then divided between the two Biologists. Mr. Couffer's survey visits were conducted on April 26; May 3, 21, and 28; and June 4 and 11, 2005. Mr. Kamada's surveys were conducted on May 4, 11, 18, and 25 and June 1 and 8, 2005. An additional set of focused surveys was conducted in 2008 to maintain the current status of species presence or absence on site. These surveys were conducted by Mr. Couffer and Amber Oneal (USFWS Permit No. TE-148554-0) on May 8, 16–18, 22, 24, 25, and 31 and June 1–3, 7, 10–12, 14, 17, 20–22, 26, 27, and 30, 2008. Ms. Oneal's survey visit was conducted on June 30, 2008. In 2015, gnatcatcher surveys were repeated for a third time to maintain current status of species presence or absence on the site. These surveys were conducted by Psomas Biologist Mr. Aguayo (USFWS Permit No. TE-96514A-0) along with Brian Leatherman and Adam De Luna of Leatherman BioConsulting, Inc. (Permit No. 827493-8). These surveys were conducted on April 28 and 29; May, 5, 6, 12, 13, 14, 19, 20, 21, 26, 27, and 28; and June 2, 3, 4, 10, 11, 12, 16, and 17, 2015.

Surveys generally started before 6:30 AM and concluded before 12:00 PM. Weather conditions met USFWS survey protocol requirements designed to optimize gnatcatcher detections. Weather conditions that were too cold (less than 55°F), too hot (greater than 95°F), or too windy (greater than 15 miles per hour) were avoided. Surveys were conducted by slowly walking through all appropriate habitats while listening and watching for gnatcatcher activity. Taped recordings of gnatcatcher vocalizations were played as an attempt to elicit responses from any gnatcatchers present. The frequency of vocalization playback varied depending on site conditions (such as habitat patch size, topography, vegetation density, and ambient noise levels). A detailed description of the 2005, 2008, and 2015 surveys can be found in the California gnatcatcher focused survey reports provided in Appendix H.

3.5.4 Burrowing Owl

BonTerra Consulting conducted a habitat assessment and focused burrow survey for the burrowing owl on the project site on April 5, 2007. The focused burrow survey was conducted by walking transects across potential habitat to obtain 100 percent visual coverage of all suitable habitat on the project site. Any burrow openings large enough to provide entry for owls were carefully checked for prey remains, cast pellets, whitewash, feathers, or any other indication of burrowing owl presence. No crepuscular surveys for burrowing owls were conducted since the

focused burrow survey had negative results. A detailed description of the methods and results of the survey can be found in Appendix I.

Given the time period since the previous surveys, a follow-up burrow survey will be conducted prior to grading activities. If suitable burrows are detected, focused surveys for burrowing owl would then be conducted pursuant to the protocols described by the CDFW (CDFG 2012).

3.6 OAK TREE SURVEYS

Oak tree surveys were conducted on the project site in 1994 and 2010 to support previous requests for oak tree removal permits. In order to evaluate oak tree impacts related to the currently proposed project, a new oak tree survey was performed by Psomas Certified Arborists David Hughes (International Society of Arboriculture [ISA] Certificate No. WE-7752A) and Mr. Bristle (ISA Certificate No. WE-10233A). Field surveys were performed on April 13 and 14, 2016. The field survey identified all oak trees subject to the County of Los Angeles Oak Tree Ordinance (Section 22.56.2050 of the Los Angeles County Code) and oak woodland resources defined by the County of Los Angeles Oak Woodlands Management Plan (LACOWHCSA 2011). A detailed account of the survey methods and results can be found in the Oak Tree Survey Report provided in Appendix J.

3.7 JURISDICTIONAL WATERS

A Jurisdictional Delineation Report was performed by EIP Associates in 1999 to identify the type and extent of “waters of the U.S.”, “waters of the State”, and wetland resources on the project site that are under the jurisdiction of the USACE, the RWQCB, and the CDFW, collectively referred to as the “resource agencies”. This report analyzed all four phases of the project site and provided the basis for resource agency permits that allowed Phase A construction to occur.

Given the length of time that had passed since the original Jurisdictional Delineation Report, the USACE requested an updated report (Psomas 2016a). Jurisdictional delineation field work was performed by Psomas Regulatory Specialist Mr. Hughes on May 8, 20, 21, and 22, 2015. The 2015 field work evaluated only Phases B and C of the project site as those are the only remaining portions of the project site to be developed. The limits of USACE non-wetland “waters of the U.S.” and RWQCB “waters of the State” were identified by the presence of an ordinary high water mark (OHWM). Wetland features were identified based on the USACE’s three-parameter approach in which wetlands are defined by the presence of hydrophytic vegetation, hydric soils, and presence of wetland hydrology indicators. The limits of CDFW jurisdictional waters were identified as either the top of bank or the outer drip line of riparian vegetation. A detailed description of the methods and results of the delineation can be found in the Jurisdictional Delineation Report provided in Appendix K.

4.0 **EXISTING CONDITIONS**

This section describes the biological resources that occur or potentially occur on the project site or within nearby off-site areas associated with the proposed project. The following topics are discussed below: vegetation types; wildlife populations and movement patterns; oak tree surveys; jurisdictional waters; Los Angeles County SEAs, either known to occur or potentially occurring in the project site or proposed off-site impact areas.

4.1 **VEGETATION TYPES**

This section describes the vegetation types and other areas that occur on the project site (Exhibit 6). Native vegetation types include alluvial scrub, blue elderberry scrub, chamise chaparral, chamise chaparral/annual grassland, chamise chaparral–sage scrub, coast live oak woodland, coast live oak/blue elderberry scrub, coast live oak/holly-leaf cherry woodland, Fremont cottonwood woodland, holly-leaf cherry woodland, mixed chaparral–alluvial scrub/annual grassland, sage scrub, sage scrub/annual grassland, and southern riparian scrub. Non-native vegetation types include annual grassland and ornamental. Other areas include disturbed–developed and open water. Off-site impacts consist largely of disturbed–developed areas and ornamental landscaping and will result from connecting Phase A roads into Phases B and C. A small amount (0.31 acre) of native vegetation (sage scrub and sage scrub/annual grassland) will be impacted from these activities. A description of each vegetation type/other area is found below. Table 2 identifies the acreage for the vegetation types and other areas on the project site or in proposed off-site impact areas.

4.1.1 **Alluvial Scrub**

Alluvial scrub occurs along the banks and benches of the drainage above the active channel in San Francisquito Canyon and is located along the northeastern side of the project site. The dominant plant species of this vegetation type is scalebroom (*Lepidospartum squamatum*). Other plant species occurring at a lower density include thick-leaf yerba santa (*Eriodictyon crassifolium*); our Lord's candle (*Hesperoyucca whipplei*); Great Basin sagebrush (likely Parish's sagebrush [*A. tridentata* ssp. *parishii*]), and California buckwheat (*Eriogonum fasciculatum*). Non-native annual grasses and occasional Fremont cottonwood trees (*Populus fremontii*) are also present. This vegetation type most closely corresponds with scalebroom scrub from the *Manual of California Vegetation* (Sawyer et al. 2009).

4.1.2 **Blue Elderberry Scrub**

Blue elderberry scrub is dominated by blue elderberry (*Sambucus nigra* ssp. *caerulea*). This vegetation type occurs along several small drainages in the southern portion of the project site and is also present along the bottom of a broad canyon in the north-central portion of the project site. Other species occurring in this vegetation type include sacapellote (*Acourtia microcephala*), fragrant sumac (*Rhus aromatica*), and sparse chamise (*Adenostoma fasciculatum*). This vegetation type most closely corresponds with blue elderberry stands from the *Manual of California Vegetation* (Sawyer et al. 2009).

TABLE 2
VEGETATION TYPES AND OTHER AREAS

Vegetation Types and Other Areas	On-Site Total (acres)
Native Vegetation Types	
alluvial scrub (<i>Lepidospartum squamatum</i> Alliance)	27.51
blue elderberry scrub (<i>Sambucus nigra</i> Alliance)	13.11
chamise chaparral (<i>Adenostoma fasciculatum</i> Alliance)	274.23
chamise chaparral–annual grassland (<i>Adenostoma fasciculatum</i> Alliance)	34.80
chamise chaparral–sage scrub (<i>Adenostoma fasciculatum</i> – <i>Salvia mellifera</i> Alliance)	364.54
coast live oak woodland (<i>Quercus agrifolia</i> Alliance)	5.34
coast live oak woodland–blue elderberry scrub (<i>Quercus agrifolia</i> – <i>Sambucus nigra</i> Alliances)	7.80
coast live oak woodland–holly-leaf cherry woodland (<i>Quercus agrifolia</i> – <i>Prunus ilicifolia</i> Alliances)	0.47
Fremont cottonwood woodland (<i>Populus fremontii</i> Alliance)	1.58
holly-leaf cherry woodland (<i>Prunus ilicifolia</i> Alliance)	8.19
mixed chaparral–alluvial scrub–annual grassland (no Alliance)	11.39
sage scrub (<i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Alliance)	269.66
sage scrub–annual grassland (<i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Alliance)	158.13
southern riparian scrub (<i>Salix lasiolepis</i> Alliance)	4.63
Subtotal Native Vegetation Types	1,181.37
Non-Native Vegetation Types	
annual grassland (<i>Bromus</i> semi-natural stands)	54.76
ornamental	8.38
Subtotal Non-Native Vegetation Types	63.14
Other Areas	
disturbed–developed	27.07
open water	2.82
Subtotal Other Areas	29.89
Total	1,274.40

4.1.3 Chamise Chaparral

The majority of the chaparral on the project site contains a mix of plant species but is dominated by chamise. The largest portion of undisturbed, high quality chaparral habitat occurs in the southern and western portions of the project site. Other dominant native perennial species in the chamise chaparral vegetation type on the project site include deerweed (*Acmispon glaber*), California sagebrush (*Artemisia californica*), purple sage (*Salvia leucophylla*), California buckwheat, and our Lord's candle. Chamise chaparral is also a vegetation type described in the *Manual of California Vegetation* (Sawyer et al. 2009).

4.1.4 Chamise Chaparral/Annual Grassland

The chamise chaparral/annual grassland vegetation type consists of the chamise chaparral species listed above, interspersed with patches of dense annual grasses and forbs. Most of the annual grassland species present in this vegetation type are non-native species, including slender wild oats (*Avena barbata*), soft chess (*Bromus hordeaceus*), foxtail chess (*Bromus madritensis* ssp. *rubens*), cheat grass (*Bromus tectorum*), tocalote (*Centaurea melitensis*), and short-pod mustard (*Hirschfeldia incana*). Chamise chaparral/annual grassland is also a vegetation type described in the *Manual of California Vegetation* (Sawyer et al. 2009).

4.1.5 Chamise Chaparral–Sage Scrub

Chamise chaparral–sage scrub vegetation type contains a relatively even mix of species present in both the sage scrub and chamise chaparral vegetation types; generally, it is a transition vegetation type that is positioned between areas where there are chamise chaparral and sage scrub vegetation. The dominant species present in this vegetation type include California sagebrush, chamise (*Adenostoma fasciculatum*), black sage (*Salvia mellifera*), and purple sage. This vegetation type most closely corresponds with chamise–black sage chaparral from the *Manual of California Vegetation* (Sawyer et al. 2009).

4.1.6 Coast Live Oak Woodland

Coast live oak woodland occurs in two areas in the central portion of the project site in the canyon bottoms. This vegetation type is dominated by coast live oak trees (*Quercus agrifolia*) and has an understory of non-native grassland species, including brome grasses (*Bromus* sp.) and wild oats (*Avena* sp.). Coast live oak woodland is also a vegetation type described in the *Manual of California Vegetation* (Sawyer et al. 2009).

4.1.7 Coast Live Oak Woodland/Blue Elderberry Scrub

A small area of coast live oak/blue elderberry scrub occurs in a shallow canyon in the northwestern portion of the project site. This vegetation type is co-dominated by coast live oak and blue elderberry. Other species occurring in this vegetation type include chamise and sacapellote. This vegetation type most closely corresponds with coast live oak woodland/chaparral from the *Manual of California Vegetation* (Sawyer et al. 2009).

4.1.8 Coast Live Oak Woodland–Holly-Leaf Cherry Woodland

Coast live oak woodland–holly-leaf cherry woodland occurs in a small area along the southern boundary of the project site at the base of the foothills. This vegetation type is defined by a relatively even mix of coast live oak and holly-leaf cherry (*Prunus ilicifolia*). Other common species in this vegetation type include chamise, fragrant sumac, and blue elderberry. This vegetation type most closely corresponds with coast live oak woodland/chaparral from the *Manual of California Vegetation* (Sawyer et al. 2009).

4.1.9 Fremont Cottonwood Woodland

Fremont cottonwood woodland occurs in San Francisquito Canyon in the northeastern portion of the project site. This vegetation type is dominated by Fremont cottonwood trees, many of which have resprouted from crown and stems damaged during the 2002 Copper Fire. Scattered willows (*Salix* spp.) and giant reed (*Arundo donax*) are also present. This vegetation type most closely corresponds with Fremont cottonwood forest from the *Manual of California Vegetation* (Sawyer et al. 2009).

4.1.10 Holly-Leaf Cherry Woodland

Holly-leaf cherry woodland is defined by the dominance of holly-leaf cherry. This vegetation type occurs in two drainages on the southwestern and southeastern sides of the project site. Other species commonly found in the holly-leaf cherry woodland include fragrant sumac, blue elderberry, and sacapellote. This vegetation type most closely corresponds with holly-leaf cherry chaparral from the *Manual of California Vegetation* (Sawyer et al. 2009).

4.1.11 Mixed Chaparral–Alluvial Scrub/Annual Grassland

This vegetation type is located in a flat canyon bottom with alluvial soils in the eastern portion of the project site. Species that occur in this area are associated with chaparral communities such as holly-leaf redberry (*Rhamnus ilicifolia*), holly-leaf cherry, fragrant sumac, thick-leaf yerba santa, Great Basin sagebrush, and California buckwheat. Scalebroom, a dominant component of alluvial scrub, is also commonly found in this area. Non-native annual grasses such as slender wild oats and ripgut brome (*Bromus diandrus*) are also common species. This vegetation type has no equivalent type the *Manual of California Vegetation* (Sawyer et al. 2009).

4.1.12 Sage Scrub

Sage scrub on the site is dominated by a mix of sage scrub species. Areas of sage scrub in the southern portions of the project site are relatively undisturbed and of higher quality than those in the north. The dominant species present in these areas include California sagebrush, black sage, California buckwheat, and purple sage. This vegetation type most closely corresponds with California sagebrush–California buckwheat scrub from the *Manual of California Vegetation* (Sawyer et al. 2009).

4.1.13 Sage Scrub/Annual Grassland

The sage scrub/annual grassland vegetation type contains an open mix of the sage scrub species (described for the sage scrub vegetation type) interspersed with patches of dense annual grasses and forbs. Most of the annual grassland species present in this vegetation type are non-native species, including slender wild oats, soft chess, foxtail chess, cheat grass, tocalote, and short-pod mustard. Sage scrub/annual grassland occurs primarily in the northern and eastern portions of the project site, in areas where the 2002 Copper Fire burned more extensively. This vegetation type most closely corresponds with disturbed California sagebrush–California buckwheat scrub from the *Manual of California Vegetation* (Sawyer et al. 2009).

4.1.14 Southern Riparian Scrub

Southern riparian scrub is dominated by several species of willow, including black willow (*Salix gooddingii*), arroyo willow (*Salix lasiolepis*), and narrow-leaf willow (*Salix exigua*). This vegetation type occurs in patches in San Francisquito Canyon in the northeastern portion of the project site. Other species present in this vegetation type include mule fat (*Baccharis salicifolia*), tamarisk (*Tamarix ramosissima*), and giant reed. This vegetation type most closely corresponds with arroyo willow thickets from the *Manual of California Vegetation* (Sawyer et al. 2009).

4.1.15 Annual Grassland

Annual grassland areas occur primarily in the northern and northeastern portions of the project site and are typically associated with dirt roads and/or firebreaks. The dominant species in these areas are non-native annual grass species, including soft chess, ripgut brome, and slender wild oats. Ruderal (weedy) species such as tree tobacco (*Nicotiana glauca*) and tocalote are also

present. This vegetation type most closely corresponds with annual brome grassland from the *Manual of California Vegetation* (Sawyer et al. 2009).

4.1.16 Ornamental

Ornamental areas consist of non-native landscaped plantings located adjacent to developed areas along Avenida Rancho Tesoro. .

4.1.17 Disturbed–Developed

Disturbed and developed areas consist of dirt roads or other maintained areas that either lack vegetation or support a sparse cover of ruderal species. Numerous dirt roads traverse the project site, and a large disturbed area is associated with a residence in the northeastern corner of the project site.

4.1.18 Open Water

Open water was observed in a detention basin west of Avenida Rancho Tesoro near its northern terminus. Though this basin was inundated during the field visit when the site was mapped, open water is present on a temporary basis after storm events.

4.2 WILDLIFE POPULATIONS AND MOVEMENT PATTERNS

Wildlife species observed or expected to occur on the project site are discussed below. All special status species mentioned below are discussed in greater detail in the Special Status Wildlife section (see Section 5.4 below).

4.2.1 Fish

Most creeks and waterways in Southern California are ephemeral and subject to periods of high water flow in winter and spring and little to no flow in late summer and fall. There are a number of drainages on the project site. Most of these drainages convey water only during storm events. San Francisquito Canyon is the most substantial drainage on the project site and is located in the easternmost portion of Phase C.

Unarmored threespine stickleback, Santa Ana sucker, and arroyo chub were observed in San Francisquito Creek within the boundaries of the project site during the 2005 survey (Exhibit 7). Additionally, there was evidence that all three species may breed on or near the project site.

All three of these fish species were known to occur in the upper reaches of San Francisquito Creek, several miles north of the project site, where there is perennial flowing water. Since the 2005 survey was conducted, it is possible that unarmored threespine stickleback has been extirpated from San Francisquito Creek, a result of severe winter storms in 2006 that washed excessive amounts of sediment into the creek that were destabilized from the Copper Fire in 2002. Unarmored threespine stickleback was last observed in the area during 2006 surveys (Gallegos et al. 2007), and there have been no reported detections since that date (CDFW 2016a). The effect of excessive sediment in the creek on the other two fish species is unclear.

Because most watercourses in the area are ephemeral and infiltrate into sandy soils on and near the project site, fish habitat is extremely limited and only the most ubiquitous and tolerant fish species, such as the non-native mosquito fish (*Gambusia affinis*), are expected to occur.

4.2.2 Amphibians

Amphibians require moisture for at least a portion of their life cycle and many require standing or flowing water for reproduction. Terrestrial species may or may not require standing water for reproduction. These species are able to survive in dry areas by aestivating (i.e., remaining beneath the soil in burrows or under logs and leaf litter and emerging only when temperatures are low and humidity is high). Many of these species' habitats are associated with water and they emerge to breed once the rainy season begins. Soil moisture conditions can remain high throughout the year in some habitat types depending on factors such as the amount of vegetation cover, elevation, and slope aspect. All suitable habitat areas ~~potentially suitable~~ for amphibians were surveyed. The riparian habitat along San Francisquito Canyon on the project site has the potential to support several amphibian species. Species observed include western spadefoot, western toad (*Anaxyrus boreas*), and Baja California treefrog (*Pseudacris hypochondriaca*). Western spadefoot tadpoles were observed in several pools in an unnamed drainage at one locality in the southwestern portion of the project site (Exhibit 7).

4.2.3 Reptiles

Reptilian diversity and abundance typically varies with vegetation type and character. Many species prefer only one or two vegetation types; however, most species will forage in a variety of habitats. Most species occurring in open areas use rodent burrows for cover, protection from predators, and refuge during extreme weather conditions.

Reptile species observed on the project site include western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), coast horned lizard (*Phrynosoma blainvillii*), Skilton's skink (*Eumeces skiltonianus skiltonianus*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), San Diego alligator lizard (*Elgaria multicarinata webbiai*), Southern California legless lizard (*Anniella stebbinsi*), red racer (*Coluber flagellum piceus*), San Diego gopher snake (*Pituophis catenifer annectens*), California kingsnake (*Lampropeltis californiae*), and southern Pacific rattlesnake (*Crotalus oreganus helleri*).

The sage scrub and chaparral vegetation types on the project site support a high diversity of reptile species that use these areas during most seasons due to suitable soils for burrowing and suitable vegetation for cover. Typical species observed or expected in the sage scrub and chaparral areas include the western fence lizard, side-blotched lizard, coast horned lizard, coastal whiptail, San Diego alligator lizard, and southern Pacific rattlesnake.

Reptile use of the annual grassland vegetation type is expected to vary during the year. In addition to normal seasonal fluctuations in activity levels, the presence of most reptile species in these areas is likely to be determined by the growth stages of the grasses; more species are present when the grasses are mature, but the diversity declines considerably after disturbance. Reptile species observed or expected to occur in the grassland vegetation type include western fence lizard, side-blotched lizard, San Diego alligator lizard, red racer, San Diego gopher snake, California kingsnake, and southern Pacific rattlesnake.

Woodland and wash habitats (e.g., alluvial scrub and southern riparian scrub) support a moderate level of diversity of lizards and snakes. The western fence lizard, coast horned lizard, Skilton's skink, and coastal whiptail are typically among the most common reptiles in these vegetation types. Other reptiles expected in these vegetation types on the project site include the San Diego alligator lizard, San Diego gopher snake, and ringneck snake (*Diadophis punctatus*).

4.2.4 **Birds**

A variety of bird species are expected to be residents on the project site, using the habitats throughout the year. Other species are present only during certain seasons. For example, the white-crowned sparrow (*Zonotrichia leucophrys*) is expected to occur on the project site during the winter season and then migrate north in the spring to breed during the summer.

On the project site, sage scrub and chaparral vegetation types support bird populations composed of species adapted to the dense vegetation that typifies these areas. Although large numbers of individuals can often be found inhabiting these vegetation types, species diversity is usually low to moderate, depending on the season. A relatively high proportion of the birds breeding in these habitats are year-round residents. Such species observed during the surveys include California quail (*Callipepla californica*), Bewick's wren (*Thryomanes bewickii*), wrentit (*Chamaea fasciata*), California thrasher (*Toxostoma redivivum*), spotted towhee (*Pipilo maculatus*), and California towhee (*Pipilo crissalis*).

Woodland and wash habitats (e.g., alluvial scrub and southern riparian scrub) are extremely important, providing food, cover, and breeding habitat for a wide variety of species throughout the year. Bird species observed that are expected to breed in these habitats on the project site include mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), acorn woodpecker (*Melanerpes formicivorus*), Nuttall's woodpecker (*Picoides nuttallii*), Say's phoebe (*Sayornis saya*), bushtit (*Psaltiriparus minimus*), phainopepla (*Phainopepla nitens*), song sparrow (*Melospiza melodia*), and Bullock's oriole (*Icterus bullockii*).

The annual grassland vegetation type supports fewer bird species than most other vegetation types on the project site. However, these areas do provide important habitat for a number of species. Mourning dove, black phoebe (*Sayornis nigricans*), and lesser goldfinch (*Carduelis psaltria*) are year-long residents in these areas. Migratory birds expected to use this vegetation type on the project site either during the summer or winter include western kingbird (*Tyrannus verticalis*), savannah sparrow (*Passerculus sandwichensis*), and lark sparrow (*Chondestes grammacus*).

Raptors observed on the project site include the turkey vulture (*Cathartes aura*), white-tailed kite (*Elanus leucurus*), northern harrier (*Circus cyaneus*), sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), and prairie falcon (*Falco mexicanus*). The red-shouldered hawk (*Buteo lineatus*) is also expected to occur on the project site.

4.2.5 **Mammals**

As with other taxonomic groups, the presence of different vegetation types on the project site offer mammals a variety of habitats. This variety, in turn, is expected to support a relatively high diversity and abundance of mammals on the project site.

Small, ground-dwelling mammals observed or expected to occur on the project site include the deer mouse (*Peromyscus maniculatus*), California pocket mouse (*Perognathus californicus*), California mouse (*Peromyscus californicus*), woodrat (*Neotoma* sp.), pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus beecheyi*), and desert cottontail (*Sylvilagus audubonii*).

Bats occur throughout most of Southern California and may use any portion of the project site as foraging habitat. The Fremont cottonwood woodland and coast live oak woodland habitats on the project site also provide potential roosting opportunities. Most of the bats that could potentially

occur on the project site are inactive during the winter and either hibernate or migrate, depending on the species. The big brown bat (*Eptesicus fuscus*), Brazilian free-tailed bat (*Tadarida brasiliensis*), California myotis (*Myotis californicus*), western pipistrelle (*Pipistrellus hesperus*), and hoary bat (*Lasiurus cinereus*) may all occur on the project site.

Larger mammals, including both herbivores and carnivores, that were observed or are expected on the project site include the striped skunk (*Mephitis mephitis*), bobcat (*Felis rufus*), mountain lion (*Puma concolor*), mule deer (*Odocoileus hemionus*), Virginia opossum (*Didelphis virginiana*), gray fox (*Urocyon cinereoargenteus*), common raccoon (*Procyon lotor*), and coyote (*Canis latrans*).

4.2.6 Wildlife Movement

Wildlife corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, transitions in vegetation, or human disturbance, which is exacerbated by fragmentation of open space by urbanization creating isolated “islands” of wildlife habitat. In the absence of linkages that allow movement among areas of suitable habitat, various studies have concluded that some wildlife species, especially larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat since it (i.e., fragmented or isolated habitat) prohibits the immigration of new individuals and genetic information (MacArthur and Wilson 1967; Soule 1987; Harris and Gallagher 1989; Bennett 1990). Corridors mitigate the effects of this fragmentation by (1) allowing animals to move among areas of remaining habitat, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fire or disease) will result in population or local species extirpation; and (3) serving as travel routes for individual animals as they move in their home ranges in search of food, water, mates, and other necessary resources (Noss 1983; Farhig and Merriam 1985; Simberloff and Cox 1987; Harris and Gallagher 1989).

Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas or individuals extending range distributions); (2) seasonal migration; and (3) movement related to home range activities (e.g., foraging for food or water; defending territories; or searching for mates, breeding areas, or cover). A number of terms such as “travel route”, “wildlife corridor”, “habitat linkage”, and “wildlife crossing” have been used in various wildlife movement studies to refer to areas in which wildlife move from one area to another. To clarify the meaning of these terms and to facilitate the discussion of wildlife movement, these terms are defined below.

- **Travel Route.** A landscape feature (such as a ridgeline, drainage, canyon, or riparian strip) in a larger natural habitat area that is used frequently by animals to facilitate movement and to provide access to necessary resources (e.g., water, food, cover, den sites). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another. It contains adequate food, water, and/or cover for wildlife moving between habitat areas and provides a relatively direct link between target habitat areas.
- **Wildlife Corridor.** A piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another. Wildlife corridors are usually bound by urban land areas or other areas that are unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and to facilitate wildlife movement while in the corridor. Larger, landscape-level corridors (often referred to as “habitat or landscape linkages”) can provide both transitory and resident habitat for a variety of species.

- **Wildlife Crossing.** A small, narrow area, relatively short in length and generally constricted in nature that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents movement. Crossings are typically man-made and include culverts, underpasses, drainage pipes, and tunnels that provide access across or under roads, highways, pipelines, or other physical obstacles. These often represent “choke points” along a movement corridor, which may impede wildlife movement and increase the risk of predation.

It is important to note that wildlife corridors, as defined above, may not yet exist in a large open space area in which there are few or no man-made or naturally occurring physical constraints to wildlife movement. Given an open space area that is large enough to maintain viable populations of species and to provide a variety of travel routes (e.g., canyons, ridgelines, trails, riverbeds, and others), wildlife will use these “local” routes while searching for food, water, shelter, and mates and will not need to cross into other large open space areas. Based on their size, location, vegetative composition, and food availability, some of these movement areas (e.g., large drainages and canyons) are used for longer lengths of time and serve as source areas for food, water, and cover, particularly for small- and medium-sized animals. This is especially true if the travel route is in a larger open space area. However, once open space areas become constrained and/or fragmented as a result of urban development or construction of physical obstacles (such as roads and highways), the remaining landscape features or travel routes that connect the larger open space areas become corridors as long as they provide adequate space, cover, food, and water and do not contain obstacles or distractions (e.g., man-made noise, lighting) that would generally hinder wildlife movement.

In general, animals discussed in the context of movement corridors typically include the larger, more mobile species such as mule deer (*Odocoileus hemionus*), American black bear (*Ursus americanus*), mountain lion, gray fox (*Urocyon cinereoargenteus*), and coyote (*Canis latrans*), and even some of the mid-size mammals such as raccoon (*Procyon lotor*), striped skunk, American badger (*Taxidea taxus*), and Virginia opossum. Most of these species have relatively large home ranges in which to move to find adequate food, water, and breeding and wintering habitat. It is therefore assumed that conclusions and discussions regarding movement corridors for these “indicator” species will, by virtue of their larger movement patterns, include movement corridors for many smaller, less mobile species (such as reptiles, amphibians, and rodents). Conversely, the movement of smaller, less mobile species (e.g., herpetofauna) is generally discussed in the context of local movement. Regional movement for these species occurs as genes flow over many generations and requires at least local movement of individuals to the edges of other individuals’ home ranges.

Different bird species are likely to utilize movement corridors to a greater or lesser extent. Most bird species simply fly in more or less direct paths to the desired location. Conversely, some habitat-dependent species will not move very far from their preferred habitat types and are less inclined to fly over unsuitable habitat.

Ideally, a corridor should encompass a heterogeneous mix of habitats to accommodate the ecological requirements of the variety of species in any particular region. Most species typically prefer an adequate amount of vegetation cover during movement periods that serve as both a food source as well as protection from weather and potential predators. Drainages, riparian areas, and canyon bottoms typically serve as natural movement corridors because these features provide cover, food, and often water for a variety of species. Very few species will move across large expanses of open, uncovered habitat unless it is the only option available to them. For some species, habitat linkages and movement corridors should be able to support animals for a sustained period of time, not just for travel. Smaller or less mobile animals (such as rodents and

reptiles) may require long periods to traverse a corridor, so the corridor must contain adequate food and cover for survival.

Regional Wildlife Movement

Large areas of mountainous open space in the project region are found in the Los Padres Forest and the Angeles National Forest. This open space lies between the developed Los Angeles Basin to the south and the Antelope Valley to the north. The Santa Susana Mountains lie to the south of the project site and the San Gabriel Mountains lie to the east, with the Santa Monica Mountains near the coast to the south and the San Bernardino Mountains farther to the east. Because of the similar adaptations required of animals to survive in the low elevations of the Santa Clarita, Antelope, and San Fernando Valleys, most species inhabiting these separate ecosystems are expected to venture south or north into or over the Santa Susana and western San Gabriel Mountains. However, animals living in these mountains are likely to use the variety of drainages, canyons, ridgelines, and other linear features to travel locally in these mountains. Most large-scale regional wildlife movement between the coastal mountains and the San Gabriel Mountains is expected to occur parallel to the Santa Clara River.

Movement along the Santa Clara River between the Santa Susana Mountains and the San Gabriel Mountains is expected to be constrained by I-5 to the west of the project site. The I-5 freeway is a heavily traveled transportation corridor that is elevated in some areas and bordered by fences and dividers along major stretches. Wildlife using the Santa Clara River as a corridor would be expected to cross under I-5, though noise associated with the freeway and development along the banks of the Santa Clara River in general would likely discourage wildlife movement.

For those species attempting to move from the Santa Susana Mountains south of the Santa Clara River north/northwest to the Angeles National Forest and San Gabriel Mountains, the open space habitat to the east of I-5 and to the west near Castaic Lake offers viable habitat linkages at least as far north as Antelope Valley. This area, which includes the riparian habitat along San Francisquito Canyon, Bouquet Canyon, and Castaic Creek (including their tributaries) as well as upland habitat that occurs in the middle of the project site, is suitable for wildlife movement because most wildlife species prefer some amount of vegetation cover as a source of shelter and, for some species, protection from predators.

San Francisquito Canyon occurs along the eastern boundary of the project site. This drainage originates in the Angeles National Forest to the north of the project site and flows into the Santa Clara River, approximately four miles south of the project site. Other drainages on the project site, including the Wayside Canyon drainage, are tributaries to Castaic Creek, which is itself a tributary to the Santa Clara River. Due to the constant fluctuations in water volume from Castaic Dam, Castaic Creek is an undependable water source for wildlife. However, it does allow for movement of fish and other aquatic wildlife during portions of the year when water is present. These drainages may serve as regional wildlife movement corridors between the Angeles National Forest and the Santa Clara River for some wildlife species (such as coyote, bobcat, and special status fish species) during periods of high stream flow. However, regional movement downstream of the project site is expected to be limited due to the human disturbances identified above. Most regional movement would be expected to be between the project site and upstream areas.

Local Wildlife Movement

The north-south trending ridgeline on the project site may be used as a wildlife corridor by many small to large mammals and provides access to Wayside and Tapia Canyons. Multiple drainages occur on the project site, including the Wayside Canyon and San Francisquito Canyon drainages. The San Francisquito Canyon drainage is a tributary to the Santa Clara River, which is approximately four miles south of the project site. The Wayside Canyon drainage and associated tributaries flow into Castaic Creek, itself a tributary to the Santa Clara River, which connects to the Santa Susana Mountains. Though some development is present in Wayside Canyon (such as the Pitchess Detention Center and the Wayside Canyon oil fields), the open space areas of the drainage are still expected to support wildlife movement between the project site and Castaic Creek. San Francisquito Canyon is bound by existing development for approximately four miles before it joins the Santa Clara River and is expected to function as a wildlife movement corridor. Wildlife species expected to use these drainages include, but are not limited to, coyote, bobcat, mountain lion, and mule deer. These larger and more mobile wildlife species are expected to use the habitats in these drainages to move within and between the adjacent open space areas, while the smaller and less mobile species (such as small mammals, amphibians, and reptiles) as well as a large number of plant species may live in the “route” and require long periods or several generations of individuals to traverse to adjacent areas.

4.3 OAK TREE SURVEYS

The Oak Tree Permit issued for the originally proposed project (Permit No. 92-074[5] dated May 5, 1999), authorized the removal of 34 coast live oaks in Phases B and C that meet the criteria for protection under the County of Los Angeles Oak Tree Ordinance No. 88-0157 (CLAOTO). The permit also authorized encroachment in the protected area of 60 additional coast live oaks. Phase A of the Tesoro del Valle project impacted three coast live oak trees that were authorized for removal by the above-referenced permit.

Due to revisions to the project’s grading boundary in subsequent years, a supplemental oak tree survey report was prepared in 2010 (BonTerra Consulting 2010). This analysis identified 11 additional coast live oak trees that would be impacted by the revised grading boundary (5 of these trees were previously authorized for encroachment) and 1 additional tree that would be encroached upon. These proposed impacts were later authorized by Oak Tree Permit No. 2010-00029, dated October 18, 2010.

An oak tree survey was performed in 2016 to identify individual oak trees that are protected by the CLAOTO in Phases B and C of the project. Additionally, the location and quantity of oak woodlands were identified as defined by the Los Angeles County Oak Woodlands Management Plan (hereinafter referred to as the “Oak Woodlands Management Plan”) (LACOWHCSA 2011). The 2016 survey identified a total of 11 individual coast live oaks in the project impact footprint that meet the minimize size requirement described in the CLAOTO. An additional 129 oak trees are located on the project site, but outside the project impact footprint (Exhibit 8).

The project site contains 10.28 acres of oak woodlands. Project construction would result in impacts to 0.31 acre (3 percent) of these woodland resources. For a detailed discussion of the survey results and individual tree descriptions, refer to Appendix J.

4.4 JURISDICTIONAL WATERS

Streambed features were assessed in 2015 to determine the type and quantity of these resources on the project site. As summarized in Section 3.7, “waters of the U.S.” under the jurisdiction of the USACE and “waters of the State” under the jurisdiction of the RWQCB were measured based on the OHWM and mapped on an aerial photograph. Test pits were excavated at ten locations to determine the presence of wetland conditions based on the presence of wetland hydrology, hydric soils, and hydrophytic vegetation. As a result of this analysis, one wetland feature, measuring 0.02 acre, was observed near the eastern boundary of the project site. This feature appeared to be sustained by a groundwater seep as no flowing surface water was observed. The limits of CDFW jurisdictional waters were measured to the top of bank for each streambed or to outer canopy of riparian vegetation, where present.

For ease of reference, the various streambed features were divided into 28 drainage features as summarized in Table 3. The location of these streambed features are shown in Exhibit 9. In all, 38.02 acres of “waters of the U.S.” occur on the site consisting of 38.00 acres of non-wetland waters and 0.02 acre of wetlands. Because no “isolated waters” occur on the site, RWQCB jurisdictional waters are equal to those of the USACE. A total of 72.81 acres of CDFW jurisdictional waters occur on the site. Because most of the streambeds contain only upland vegetation (generally chamise chaparral, sage scrub, and blue elderberry scrub), the jurisdictional limits were generally based on the top of the bank of each streambed. Approximately half of the jurisdictional waters on the project site are located in San Francisquito Creek (Drainage 8). This is because San Francisquito Creek is a very wide alluvial wash, while the other streambeds on the site are generally very narrow ephemeral streambeds. A complete description of jurisdictional waters on the site is provided in the Jurisdictional Delineation Report in Appendix K.

Jurisdictional resources in the SEA (i.e., San Francisquito Creek) consist of a wide alluvial streambed vegetated with alluvial scrub, Fremont cottonwood woodland, and southern riparian scrub. The other jurisdictional resources on the site generally consist of narrow ephemeral drainage features with upland chaparral, sage scrub, and blue elderberry scrub species growing within and adjacent to them. Exceptions to this include Wayside Canyon in the southwest corner of the project site (which supports holly-leaf cherry woodland) and two unnamed drainages in the west-central and east-central portions of the project site (which support coast live oak woodlands).

The waters and wetlands on the project site are identified on the NWI map as primarily riverine (San Francisquito Creek and Wayside Canyon) or palustrine. San Francisquito Creek is identified in the NWI as being seasonally flooded (surface water present for extended periods early in the growing season), while all other on-site waters are identified as temporary flooded (surface water present for brief periods during the growing season).

Little water from off-site sources affects the streambeds on the project site. The project site is generally the highest point in the general vicinity, and water generally drains away from the site. The exception to this is San Francisquito Creek, which conveys water that originates from the Angeles National Forest to the north.

TABLE 3
SUMMARY OF JURISDICTIONAL WATERS

Jurisdictional Feature	USACE "Waters of the U.S." and RWQCB "Waters of the State"			CDFW Jurisdictional Waters
	Non-Wetland (acres)	Wetland (acres)	Total (acres)	Total (acres)
Drainage 1	0.09	—	0.09	0.24
Drainage 2	0.08	—	0.08	0.25
Drainage 3	0.08	—	0.08	0.54
Drainage 4	0.79	—	0.79	1.62
Drainage 5	0.03	—	0.03	0.08
Drainage 6	0.03	—	0.03	0.09
Drainage 7	0.28	—	0.28	0.84
Drainage 8	19.96	—	19.96	33.73
Drainage 9	1.24	—	1.24	2.83
Drainage 10	0.20	—	0.20	0.52
Drainage 11	0.26	—	0.26	0.67
Drainage 12	0.13	—	0.13	0.27
Drainage 13	0.44	—	0.44	3.62
Drainage 14	0.34	0.02	0.36	1.85
Drainage 15	0.10	—	0.10	0.15
Drainage 16	0.27	—	0.27	0.88
Drainage 17	1.20	—	1.20	2.02
Drainage 18	7.64	—	7.64	7.87
Drainage 19	0.42	—	0.42	0.66
Drainage 20	0.36	—	0.36	0.41
Drainage 21	0.89	—	0.89	1.38
Drainage 22	0.24	—	0.24	0.52
Drainage 23	0.38	—	0.38	0.88
Drainage 24	1.21	—	1.21	7.97
Drainage 25*	0.00	—	0.00	0.11
Drainage 26	0.20	—	0.20	0.48
Drainage 27	0.97	—	0.97	2.10
Drainage 28	0.17	—	0.17	0.23
Total	38.00	0.02	38.02	72.81
USACE: U.S. Army Corps of Engineers; RWQCB: Regional Water Quality Control Board; CDFW: California Department of Fish and Wildlife * Drainage 25 is a swale feature that lacks an Ordinary High Water Mark and is therefore not considered "waters of the U.S.", though it may be subject to regulation by the CDFW. Source: Psomas 2016a				

4.5 LOS ANGELES COUNTY SIGNIFICANT ECOLOGICAL AREAS

The County of Los Angeles established SEAs in 1976 in order to designate areas with sensitive environmental conditions and/or resources. SEA boundaries are general in nature and broadly outline the biotic resources of concern (England and Nelson 1976). The northeastern corner of the project site (Phase C) includes a small portion of San Francisquito Canyon, which the County of Los Angeles has designated as SEA No. 20, also known as the Santa Clara River SEA (LACDRP 2009). Other drainages on the project site are upstream of Castaic Creek, which is also a portion of SEA No. 20. Both San Francisquito Canyon and the floodplain in the Santa Clara River were designated as SEAs primarily because of the threat of loss of suitable habitat for the unarmored threespine stickleback. This species was formerly found in the Los Angeles, San Gabriel, and Santa Ana Rivers but is now restricted to the Santa Clara River and San Francisquito Canyon.

5.0 SPECIAL STATUS SPECIES AND VEGETATION TYPES

The following section addresses special status biological resources that have been observed, reported, or that have the potential to occur on or in the project region. These resources include plant and wildlife species that have been afforded special status and/or recognition by federal and State resource agencies, as well as by the CNPS, a private conservation organization commonly relied upon for plant distribution and occurrence information. In general, the principal reason an individual taxon (i.e., species, subspecies, or variety) is given such recognition is the documented or perceived decline or limitations of its population size, geographic range, and/or distribution resulting in most cases from habitat loss.

Tables 4 and 5 provide a summary of each special status plant and wildlife species known to occur in the project region. For purposes of this biological assessment, the project region is considered to be the Santa Clarita Valley and its associated watersheds. Tables 4 and 5 also include information on the status; the likelihood of each species within the project region; and definitions for the various status designations. In addition, special status biological resources include vegetation types and habitats that are either unique, of relatively limited distribution in the region, or of particularly high wildlife value. These resources have been defined by federal, State, and local government conservation programs. Sources used to determine the special status of biological resources are as follows:

- **Plants.** Locational Inventory of Rare and Endangered Vascular Plants of California (CNPS 2016); the CNDDDB (CDFW 2016a); various Federal Register notices from the USFWS regarding listing status of plant species; and the List of Special Vascular Plants, Bryophytes, and Lichens (CDFW 2016b).
- **Wildlife.** California Wildlife Habitat Relationships Database System (CDFG 1991); CNDDDB (CDFW 2016a); various Federal Register notices from the USFWS regarding listing status of wildlife species; and List of Special Animals (CDFW 2016c).
- **Vegetation Types.** CNDDDB (CDFW 2016a), County of Los Angeles Oak Tree Ordinance (County of Los Angeles 1988); Los Angeles County Oak Woodlands Management Plan (LACOWHCSA 2011)

5.1 DEFINITIONS OF SPECIAL STATUS BIOLOGICAL RESOURCES

A federally listed Endangered species is a species facing extinction throughout all or a significant portion of its geographic range. A federally listed Threatened species is one likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.

Federally Proposed or Candidate species are those which the USFWS has officially proposed for addition to the federal Threatened and Endangered species lists. Because proposed species may soon be listed as Threatened or Endangered, these species could become listed prior to or during implementation of a proposed project.

The State of California considers an Endangered species as one whose prospects of survival and reproduction are in immediate jeopardy; a Threatened species as one present in such small numbers throughout its range that it is likely to become an Endangered species in the near future in the absence of special protection or management; and a Rare species as one present in such small numbers throughout its range that it may become Endangered if its present environment worsens. The Rare species designation applies only to California native plants. The California Endangered Species Act authorizes the CDFW to issue permits authorizing incidental take of Threatened and Endangered species.

A California Species of Special Concern is an informal designation which the CDFW uses for some declining wildlife species that are not State Candidates for listing. This designation does not provide legal protection, but signifies that these species are recognized as special status by the CDFW.

Species that are California Fully Protected and Protected include those protected by special legislation for various reasons, such as the mountain lion and white-tailed kite. Fully Protected species may not be taken or possessed at any time. California Protected Species include those species that may not be taken or possessed at any time except under special permit from CDFW issued pursuant to the *California Code of Regulations* (Title 14, Sections 650 and 670.7), or Section 2081 of the *California Fish and Game Code*.

A species that is considered a Special Animal is one that is tracked by the CNDDDB. Species of Local Concern are those that have no official status with the resource agencies, but are being watched because either there is a unique population in the region or the species is declining in the region.

The CNPS is a private resource conservation organization that has developed an inventory of California's special status plant species (CNPS 2016). This inventory is the summary of information on the distribution, rarity, and endangerment of California's vascular plants. The rarity of these plants is represented in the California Rare Plant Rank (CRPR) system that identifies four general categories of rare plants. CRPR presumes that 1A plant species are extinct in California because they have not been seen in the wild for many years. CRPR 1B plants are considered to be Rare, Threatened, or Endangered throughout their range. Plants with a CRPR of 2A are presumed extirpated from California, but are more common elsewhere. Plants with a CRPR of 2B are considered Rare, Threatened, or Endangered in California, but are more common elsewhere. Plant species for which CNPS needs additional information are included as CRPR 3. CRPR 4 plant species are those of limited distribution in California whose susceptibility to threat appears low at this time. An extension of .1 is assigned to plants that are considered to be "seriously threatened" in California (i.e., over 80 percent of the occurrences are threatened or have a high degree and immediacy of threat). Extension .2 indicates the plant is "fairly threatened" in California (i.e., between 20 and 80 percent of the occurrences are threatened or have a moderate degree and immediacy of threat). Extension .3 is assigned to plants that are considered "not very threatened" in California (i.e., less than 20 percent of occurrences are threatened or have a low degree and immediacy of threat or no current threats are known). The absence of a threat code extension indicates that this information is lacking for the plant(s) in question.

5.2 SPECIAL STATUS VEGETATION TYPES

In addition to providing an inventory of special status plant and wildlife species, the CNDDDB also provides an inventory of vegetation types that are considered special status by State and federal resource agencies, academic institutions, and various conservation groups (such as CNPS). In addition, the County of Los Angeles Oak Tree Ordinance protects all oak trees that are at least eight inches or more in diameter at breast height (dbh), or 4.5 feet above natural grade (County of Los Angeles 1988). At the community level, oak woodlands are protected via Senate Bill (SB) 1334, which led to the creation of the Los Angeles County Oak Woodlands Management Plan (LACOWHCSA 2011). Under this plan, oak woodlands are defined as those areas where two or more oak tree areas of influence overlap (i.e., area that is ten times the size of a tree's canopy). Impacts to oak woodlands are evaluated based on the impact severity and level of significance. Finally, all wetland and riparian vegetation types are also considered special status species by (1) the CDFW in its capacity as a natural resource trustee for purposes of CEQA review and (2) the federal Clean Water Act, Section 404, which protects "waters of the United States", including those jurisdictional wetlands that are defined by the presence of hydrophytic vegetation,

hydric soils, and wetland hydrology. The CDFW considers the vegetation types listed below as being a high priority for preservation.

Special status vegetation types on the project site include alluvial scrub; chamise chaparral–sage scrub; coast live oak woodland; coast live oak woodland/blue elderberry scrub; coast live oak woodland–holly-leaf cherry woodland; Fremont cottonwood woodland; holly-leaf cherry woodland; mixed chaparral–alluvial scrub/annual grassland; sage scrub; sage scrub/annual grassland; and southern riparian scrub. See Section 4.1 for a detailed discussion of these vegetation types and their distribution on the project site.

5.3 SPECIAL STATUS PLANTS

A total of 41 special status plant species potentially occur in the project region (Table 4). ~~Potentially-s~~Suitable habitat occurs on the project site for 35 of these 41. Following the table are brief descriptions of each of these special status plant species along with information on the known distribution in the region. Exhibit 7 depicts the locations of the four special status plant species that have been identified on the project site.

5.3.1 Mt. Pinos Onion

Mt. Pinos onion (*Allium howellii* var. *clokeyi*) has a CRPR of 1B.3. This bulbiferous herb typically blooms between April and June in Great Basin scrub and pinyon/juniper woodland habitats (CNPS 2016). It occurs on heavy soils at elevations of about 4,500 to 6,000 feet above msl (Munz 1974). It is known from Kern, Santa Barbara, San Luis Obispo, and Ventura Counties, and historically from Los Angeles County (CNPS 2016). According to a historical collection from 1934, it occurred in the Castaic Canyon area a few miles northwest of the project site (Jepson Flora Project 2015). No suitable habitat for this species occurs on the project site, and it was not observed during focused surveys.

5.3.2 California Androsace

California androsace (*Androsace elongata* ssp. *acuta*) has a CRPR of 4.2. It typically blooms between March and June (CNPS 2016). This annual herb occurs on dry grassy slopes of coastal sage scrub, chaparral, and southern oak woodlands at elevations below approximately 4,000 feet above msl (Munz 1974). It occurs from Southern Oregon to Baja California, Mexico (CNPS 2016). In the project region, this species has been reported from the northern base of the Liebre Mountains (Boyd 1999). Although ~~potentially~~-suitable habitat for this species occurs on the project site, California androsace was not observed during focused plant surveys.

5.3.3 Greata's Aster

Greata's aster (*Aster greatae*) has a CRPR of 1B.3. It typically blooms between June and October (CNPS 2016). This perennial herb occurs in canyons in chaparral or oak woodlands at elevations between 2,000 and 4,000 feet above msl (Munz 1974). It occurs in Los Angeles, San Bernardino, and Ventura Counties, California (CNPS 2016). In the region of the project site, this species has been reported near Cienega Campground in Fish Canyon (approximately 10 miles from the project site) and historically from Acton (approximately 20 miles from the project site) (Boyd 1999). Although ~~potentially~~-suitable habitat for this species occurs on the project site, Greata's aster was not observed during focused plant surveys.

TABLE 4
SPECIAL STATUS PLANT SPECIES
POTENTIALLY OCCURRING IN THE PROJECT REGION

Species	Status			Potential for Occurrence on the Project Site
	USFWS	CDFW	CRPR	
<i>Allium howellii</i> var. <i>clokeyi</i> Mt. Pinos onion	—	—	1B.3	No suitable habitat present; not observed during focused surveys.
<i>Androsace elongata</i> ssp. <i>acuta</i> California androsace	—	—	4.2	Potentially-s Suitable habitat present; not observed during focused surveys.
<i>Aster greatae</i> Greata's aster	—	—	1B.3	Potentially-s Suitable habitat present; not observed during focused surveys.
<i>Astragalus brauntonii</i> Braunton's milk-vetch	FE	—	1B.1	Potentially-s Suitable habitat present; not observed during focused surveys.
<i>Berberis nevinii</i> Nevin's barberry	FE	SE	1B.1	Potentially-s Suitable habitat present; not observed during focused surveys.
<i>California macrophylla</i> round-leaved filaree	—	—	1B.2	Potentially-s Suitable habitat present; not observed during focused surveys.
<i>Calochortus catalinae</i> Catalina mariposa lily	—	—	4.2	Potentially-s Suitable habitat present; not observed during focused surveys.
<i>Calochortus clavatus</i> var. <i>clavatus</i> club-haired mariposa lily	—	—	4.3	Observed during focused surveys. (Probable hybrids with slender mariposa lily.)
<i>Calochortus clavatus</i> var. <i>gracilis</i> slender mariposa lily	—	—	1B.2	Observed during focused surveys. (Probable hybrids with club-haired mariposa lily.)
<i>Calochortus fimbriatus</i> late-flowered mariposa lily	—	—	1B.2	Potentially-s Suitable habitat present; not observed during focused surveys.
<i>Calochortus plummerae</i> Plummer's mariposa lily	—	—	4.2	Potentially-s Suitable habitat present; not observed during focused surveys.
<i>Calystegia peirsonii</i> Peirson's morning-glory	—	—	4.2	Observed during focused surveys.
<i>Canbya candida</i> white pygmy-poppy	—	—	4.2	Potentially-s Suitable habitat present; not observed during focused surveys.
<i>Cercocarpus betuloides</i> var. <i>blancheae</i> island mountain mahogany	—	—	4.3	Potentially-s Suitable habitat present; not observed during focused surveys.
<i>Chorizanthe parryi</i> var. <i>fernandina</i> San Fernando Valley spineflower	FC	SE	1B.1	Potentially-s Suitable habitat present; not observed during focused surveys.
<i>Chorizanthe parryi</i> var. <i>parryi</i> Parry's spineflower	—	—	1B.1	Potentially-s Suitable habitat present; not observed during focused surveys.
<i>Deinandra minthornii</i> Santa Susana tarplant	—	SR	1B.2	No potentially -suitable habitat present; not observed during focused surveys.
<i>Deinandra paniculata</i> paniculate tarplant	—	—	4.2	Potentially-s Suitable habitat present; not observed during focused surveys.
<i>Dodecahema leptoceras</i> slender-horned spineflower	FE	SE	1B.1	Potentially-s Suitable habitat present; not observed during focused surveys.

TABLE 4
SPECIAL STATUS PLANT SPECIES
POTENTIALLY OCCURRING IN THE PROJECT REGION

Species	Status			Potential for Occurrence on the Project Site
	USFWS	CDFW	CRPR	
<i>Galium grande</i> San Gabriel bedstraw	—	—	1B.2	Potentially s Suitable habitat present; not observed during focused surveys.
<i>Harpagonella palmeri</i> Palmer's grapplinghook	—	—	4.2	Observed during focused surveys.
<i>Helianthus inexpectatus</i> Newhall sunflower	—	—	1B.1	Potentially s Suitable habitat present; not observed during focused surveys.
<i>Helianthus nuttallii</i> ssp. <i>parishii</i> Los Angeles sunflower	—	—	1A	Species presumed extinct; suitable habitat present; not observed during focused surveys.
<i>Hordeum intercedens</i> vernal barley	—	—	3.2	Potentially s Suitable habitat present; not observed during focused surveys.
<i>Horkelia cuneata</i> var. <i>puberula</i> mesa horkelia	—	—	1B.1	Potentially s Suitable habitat present; not observed during focused surveys.
<i>Juglans californica</i> Southern California black walnut	—	—	4.2	Potentially s Suitable habitat present; not observed during focused surveys.
<i>Juncus acutus</i> ssp. <i>leopoldii</i> southwestern spiny rush	—	—	4.2	No potentially -suitable habitat present; not observed during focused surveys.
<i>Lepechinia fragrans</i> fragrant pitcher sage	—	—	4.2	Potentially s Suitable habitat present; not observed during focused surveys.
<i>Lepechinia rossii</i> Ross' pitcher sage	—	—	1B.2	Potentially s Suitable habitat present; not observed during focused surveys.
<i>Lepidium virginicum</i> var. <i>robinsonii</i> Robinson's pepper-grass			4.3	Potentially s Suitable habitat present; not observed during focused surveys.
<i>Lilium humboldtii</i> ssp. <i>ocellatum</i> ocellated Humboldt lily	—	—	4.2	Potentially s Suitable habitat present; not observed during focused surveys.
<i>Malacothamnus davidsonii</i> Davidson's bush mallow	—	—	1B.2	Potentially s Suitable habitat present; not observed during focused surveys.
<i>Mucronea californica</i> California spineflower	—	—	4.2	Potentially s Suitable habitat present; not observed during focused surveys.
<i>Navarretia fossalis</i> spreading navarretia	FT	—	1B.1	Potentially s Suitable habitat present; not observed during focused surveys.
<i>Navarretia ojaiensis</i> Ojai navarretia	—	—	1B.1	Potentially s Suitable habitat present; not observed during focused surveys.
<i>Navarretia setiloba</i> Piute Mountains navarretia	—	—	1B.1	No potentially -suitable habitat present; not observed during focused surveys.
<i>Opuntia basilaris</i> var. <i>brachyclada</i> short-joint beavertail	—	—	1B.2	Potentially s Suitable habitat present; not observed during focused surveys.
<i>Orcuttia californica</i> California Orcutt grass	FE	SE	1B.1	No potentially -suitable habitat present; not observed during focused surveys.
<i>Phacelia hubbyi</i> Hubby's phacelia	—	—	4.2	Potentially s Suitable habitat present; not observed during focused surveys.
<i>Pseudognaphalium leucocephalum</i> white rabbit-tobacco	—	—	2B.2	Potentially s Suitable habitat present; not observed during focused surveys.

TABLE 4
SPECIAL STATUS PLANT SPECIES
POTENTIALLY OCCURRING IN THE PROJECT REGION

Species	Status			Potential for Occurrence on the Project Site
	USFWS	CDFW	CRPR	
<i>Senecio aphanactis</i> rayless ragwort	—	—	2B.2	Potentially suitable habitat present; not observed during focused surveys.
<i>Sidalcea neomexicana</i> Salt Spring checkerbloom	—	—	2B.2	No potentially suitable habitat present; not observed during focused surveys.
<i>Syntrichopappus lemmonii</i> Lemmon's syntrichopappus	—	—	4.3	No potentially suitable habitat present; not observed during focused surveys.

USFWS: U.S. Fish and Wildlife Service; CDFW: California Department of Fish and Wildlife; CRPR: California Rare Plant Rank.

LEGEND

Status Definitions¹

Federal (USFWS)		State (CDFW)	
FE	Endangered	SE	Endangered
FT	Threatened		
FC	Candidate	SR	Rare

CRPR

1A. Presumed extirpated in California and rare or extinct elsewhere

1B. Rare, Threatened, or Endangered in California and elsewhere

2B. Rare, Threatened, or Endangered in California, but more common elsewhere

3. Plants for which we need more information - Review list

4. Plants of limited distribution - Watch list

CRPR Threat Code Extensions

None Plants lacking any threat information

.1 Seriously threatened in California

.2 Fairly threatened in California

.3 Not very threatened in California

Source: CNPS 2016

5.3.4 Braunton's Milk-Vetch

Braunton's milk vetch (*Astraglus brauntonii*) is a federally listed Endangered species and has a CRPR of 1B.1. This perennial herb blooms between January and August at elevations between 10 and 2,100 feet above msl. It prefers burned and disturbed areas in sandstone and carbonite soils in chaparral, coastal scrub, and grasslands (CNPS 2016). This species has a life span of two to three years and, depending on fire interval or other ecological factors, populations are typically intermittent (USFWS 1998). Braunton's milkvetch is associated with the fire-dependent chaparral habitat dominated by chamise (*Adenostoma fasciculatum*) and other sclerophyllous shrub species. This species is not strictly fire dependent, as it may persist in locations where other types of disturbance maintain suitable conditions for growth. Although ~~potentially suitable~~ habitat for this species occurs on the project site, Braunton's milk-vetch has not been observed during botanical surveys conducted in 2005, 2011, or 2016. It should be noted that this species was not observed during 2005 plant surveys which were conducted approximately three years after the project site was burned by the Copper Fire in 2002 when this species would have likely been observable.

5.3.5 Nevin's Barberry

Nevin's barberry (*Berberis nevinii*) is a federally and State-listed Endangered species and has a CRPR of 1B.1. It typically blooms between March and June (CNPS 2016). This large shrub occurs in sandy and gravelly places in coastal sage scrub and chaparral habitats at elevations between

sea level and 2,000 feet above msl (Munz 1974). It occurs in Los Angeles, Riverside, San Bernardino, and San Diego Counties (CNPS 2016). In the project region, this species has been reported from two locations in San Francisquito Canyon: near the confluence with the Santa Clara River and north of Saugus approximately three miles from the project site (CDFW 2016a). Although ~~potentially~~ suitable habitat for this species occurs on the project site, Nevin's barberry was not observed during focused plant surveys.

5.3.6 Round-Leaved Filaree

Round-leaved filaree (*California macrophylla*) has a CRPR of 1B.2. It typically blooms between March and May (CNPS 2016). This low-growing herb is found in open sites in grassland and shrubland at elevations between sea level and about 3,950 feet above msl (Hickman 1993). It occurs throughout California, Utah, and northern Mexico (Hickman 1993). In the project region, this species has been reported from Castaic Mesa just east of Castaic Lagoon a few miles northwest of the project site (CDFW 2016a). Although ~~potentially~~ suitable habitat for this species occurs on the project site, round-leaved filaree was not observed during focused plant surveys.

5.3.7 Catalina Mariposa Lily

Catalina mariposa lily (*Calochortus catalinae*) has a CRPR of 4.2. This lily grows in heavy soils, especially clay, among grassland, scrub, and oak woodland vegetation. It has a small underground bulb surrounded by a thin papery bulb coat. In early winter, it sends up a few grass-like leaves. Its flowers are produced atop medium to long slender stalks, which open between February and June, depending on weather conditions (CNPS 2016). Although ~~potentially~~ suitable habitat for this species occurs on the project site, Catalina mariposa lily was not observed during focused surveys.

5.3.8 Club-Haired Mariposa Lily

Club-haired mariposa lily (*Calochortus clavatus* var. *clavatus*) has a CRPR of 4.3. It typically blooms between May and June (CNPS 2016). This perennial herb occurs on rocky slopes, chaparral, and open forest between sea level and approximately 2,230 feet above msl (Hickman 1993). This species occurs in Los Angeles, Ventura, Santa Barbara, San Benito, and San Luis Obispo Counties (CNPS 2016). In the Liebre Mountain area of Los Angeles County, club-haired and slender mariposa lilies (*Calochortus clavatus* var. *gracilis*) (described below) are widespread in open scrub, especially in recently burned areas, and more or less freely grade into each other (Boyd 1999). In the region of the project site, club-haired mariposa lily has been reported from Pico Canyon in the Santa Susana Mountains and the Liebre Mountains area (approximately six miles from the project site); Red Mountain (approximately six miles from the project site); Texas Canyon (approximately five miles from the project site); Necktie Basin (approximately seven miles from the project site); Mint Canyon (approximately seven miles from the project site); and Castaic Canyon (approximately four miles from the project site) (Jepson Flora Project 2015). Club-haired and slender mariposa lilies were observed during focused plant surveys of the project site (Psomas 2016c; see Exhibit 7). Club-haired mariposa lilies hybridize with slender mariposa lilies (Boyd 1999) and the plants observed on the site have characteristics of both varieties. These hybrid plants occur mixed together across the site. Approximately 1,165 hybrid individuals were observed at 93 separate locations within the survey area in 2015 (Psomas 2016c). Exhibit 7 shows the locations of the populations and individuals observed in portions of the project site.

5.3.9 Slender Mariposa Lily

Slender mariposa lily (*Calochortus clavatus* var. *gracilis*) has a CRPR of 1B.2. It typically blooms between March and June (CNPS 2016). This perennial herb grows in shaded foothill canyons in

chaparral at elevations between sea level and 2,500 feet above msl (Hickman 1993; Munz 1974). This species occurs in Los Angeles and Ventura Counties. In the Liebre Mountain area of Los Angeles County, club-haired (described above) and slender mariposa lilies are widespread in open scrub, especially in recently burned areas, and more or less freely grading into each other (Boyd 1999). In the project region, this species has been reported from multiple locations near San Francisquito Canyon: near Power Plant number 1 (approximately 9.0 miles from the project site); north of Newhall (approximately 0.5 mile from the project site); between San Francisquito Canyon and Wayside Canyon (adjacent to the project site); and north of the confluence with Bee Canyon (approximately 7.0 miles from the project site) (CDFW 2016a).

Club-haired and slender mariposa lilies were observed during focused plant surveys of the project site. Club-haired mariposa lilies hybridize with slender mariposa lilies (Boyd 1999) and the plants observed on the site have characteristics of both varieties. These hybrid plants occur mixed together across the site.

5.3.10 Late-Flowered Mariposa Lily

Late-flowered mariposa lily (*Calochortus fimbriatus*) has a CRPR of 1B.2. It typically blooms between late June and mid-August. This species is a bulb-forming perennial herb that produces a branching stem that is approximately 10 to 40 inches tall. This species occurs in chaparral habitat along the coastal mountain ranges of southern Monterey, San Luis Obispo, Santa Barbara, and northern Ventura Counties (CNPS 2016). The nearest occurrence of this species is located in the Santa Susanna Mountains west of I-5 (Jepson Flora Project 2015, 2003 record). Although ~~potentially~~ suitable habitat for this species occurs on the project site, late-flowered mariposa lily was not observed during focused plant surveys.

5.3.11 Plummer's Mariposa Lily

Plummer's mariposa lily (*Calochortus plummerae*) has a CRPR of 4.2. It typically blooms between May and July (CNPS 2016). This perennial herb occurs in dry rocky places and brush between sea level and approximately 5,000 feet above msl in coastal sage scrub and yellow pine forest vegetation types (Munz 1974). This species occurs in Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties (CNPS 2016). In the project region, this species has been reported above Bee Canyon Wash near Soledad Canyon (Boyd 1999) and historically near Newhall (CDFW 2016a, 1897 record) approximately seven and six miles from the project site, respectively. Although ~~potentially~~ suitable habitat for this species occurs on the project site, Plummer's mariposa lily was not observed during focused plant surveys.

5.3.12 Peirson's Morning-Glory

Peirson's morning-glory (*Calystegia peirsonii*) has a CRPR of 4.2. It typically blooms between May and June. This perennial herb occurs in chaparral, chenopod scrub, cismontane woodland, coastal scrub, lower montane coniferous forest, and valley and foothill grassland at elevations between 100 and 4,500 feet above msl. This species occurs in Los Angeles County (CNPS 2016). Peirson's morning-glory was originally thought to be very rare and was only known from a few collections prior to 1970, but it is now believed to be more abundant in coastal sage scrub throughout the Newhall-Mint Canyon region. In the project region, this species has been reported from the Liebre Mountains area, including Castaic Creek (approximately 3 miles from the project site); Necktie Basin (approximately 7 miles from the project site); upper Osito Canyon (approximately 13 miles from the project site); the Sierra Pelona ridgeline (approximately 14 miles from the project site); the powerhouse in San Francisquito Canyon (approximately 9 miles from the project site); and Grasshopper Canyon (approximately 5 miles from the project site). Peirson's morning-glory was observed during focused plant surveys on the project site. Two small

populations of Pierson's morning-glory totaling 25 plants were observed in annual grassland habitat on the site (Psomas 2016c).

5.3.13 White Pygmy-Poppy

White pygmy-poppy (*Canbya candida*) has a CRPR of 4.2. It typically blooms between March and June (CNPS 2016). This annual herb occurs on gravelly, sandy, or granitic soils in Joshua tree woodland, Mojavean desert scrub, and Pinyon and juniper woodland at elevations between 1,968 and 4,789 feet above msl. This species occurs in Imperial, Kern, Los Angeles, and San Bernardino Counties (Hickman 1993). Although ~~potentially~~ suitable habitat for this species occurs on the project site, white pygmy-poppy was not observed during focused plant surveys.

5.3.14 Island Mountain Mahogany

Island mountain mahogany (*Cercocarpus betuloides* var. *blancheae*) has a CRPR of 4.3. It typically blooms between February and May (Hickman 1993). This shrub occurs in conifer forests and chaparral at elevations between 100 and 2,000 feet above msl. This species occurs in Los Angeles and Ventura Counties (Hickman 1993). Although ~~potentially~~ suitable habitat for this species occurs on the project site, island mountain mahogany was not observed during focused plant surveys.

5.3.15 San Fernando Valley Spineflower

San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*) is a federal Candidate species, is a State-listed Endangered species, and has a CRPR of 1B.1. It typically blooms between April and July (CNPS 2016). This annual herb occurs in dry sandy places between sea level and approximately 2,500 feet above msl, mostly in coastal sage scrub vegetation types (Munz 1974). This species was historically known from the San Fernando Valley, Newhall, Castaic, and Elizabeth Lake areas (Boyd 1999) and was presumed extinct until it was rediscovered at Ahmanson Ranch in Ventura County in 1999. In the project region, this species has been reported near Magic Mountain (approximately 4.0 miles from the project site); Castaic (approximately 3.0 miles from the project site); the Valencia Commerce Center (approximately 3.0 miles from the project site); and south of Newhall Ranch (approximately 3.5 miles from the project site) (CDFW 2016a). Although ~~potentially~~ suitable habitat for this species occurs on the project site, San Fernando Valley spineflower was not observed during focused plant surveys.

5.3.16 Parry's Spineflower

Parry's spineflower (*Chorizanthe parryi* var. *parryi*) has a CRPR of 1B.1. It typically blooms between April and June (CNPS 2016). This low-growing annual herb occurs in sandy places in coastal or desert scrub at elevations between 980 and 3,940 feet above msl (Hickman 1993). This species occurs in the San Gabriel, San Bernardino, and San Jacinto Mountains in Los Angeles, San Bernardino, and Riverside Counties (Reveal and Hardam 1989). In the project region, an immature specimen was reported from Texas Canyon approximately five miles from the project site (Boyd 1999). Although ~~potentially~~ suitable habitat for this species occurs on the project site, Parry's spineflower was not observed during focused plant surveys.

5.3.17 Santa Susana Tarplant

Santa Susana tarplant (*Deinandra minthornii*) is a State Rare species and has a CRPR of 1B.2. It typically blooms between July and November (Hickman 1993). This deciduous shrub occurs on rocky soils in chaparral and coastal scrub at elevations between 1,000 and 2,500 feet above msl. This species occurs in Los Angeles and Ventura Counties (Hickman 1993). Although ~~potentially~~

suitable habitat for this species occurs on the project site, Santa Susana tarplant was not observed during focused plant surveys.

5.3.18 Paniculate Tarplant

Paniculate tarplant (*Deinandra paniculata*) has a CRPR of 4.2. It typically blooms between April and November (Hickman 1993). This annual herb occurs on mesic soils in coastal scrub, grassland, and vernal pools at elevations between 80 and 3,080 feet above msl. This species occurs in Orange, Riverside, San Bernardino, and San Diego Counties (Hickman 1993). Although ~~potentially~~ suitable habitat for this species occurs on the project site, paniculate tarplant was not observed during focused plant surveys.

5.3.19 Slender-Horned Spineflower

Slender-horned spineflower (*Dodecahema leptoceras*) is a federally and State-listed Endangered species and has a CRPR of 1B.1. It typically blooms from April to June (CNPS 2016). This annual herb occurs primarily in alluvial sand in coastal sage scrub at elevations between 650 to 2,300 feet above msl (Hickman 1993). It occurs in Los Angeles, Riverside, and San Bernardino Counties (CNPS 2016). In the project region, this species has historically been reported from Mint Canyon and Newhall approximately seven and six miles from the project site, respectively (CDFW 2016a; 1937 and 1893 records). This species is also known to occur in Bee Canyon adjacent to Soledad Canyon. Although ~~potentially~~ suitable habitat for slender-horned spineflower occurs on the project site, this species was not observed during focused plant surveys.

5.3.20 San Gabriel Bedstraw

San Gabriel bedstraw (*Galium grande*) has a CRPR of 1B.2. It typically blooms between January and July (CNPS 2016). This deciduous shrub occurs in open, broad-leaved forest and chaparral at elevations between 1,470 and 4,920 feet above msl (Hickman 1993). This species occurs in the San Gabriel Mountains in Los Angeles County (Munz 1974). In the project region, this species has been reported south of Elizabeth Lake and northeast of Castaic approximately 14 miles from the project site (CDFW 2016a). Although ~~potentially~~ suitable habitat for San Gabriel bedstraw is present on the project site, this species was not observed during focused plant surveys.

5.3.21 Palmer's Grapplinghook

Palmer's grapplinghook (*Harpagonella palmeri*) has a CRPR of 4.2. This species typically blooms between March and May (CNPS 2016). This small, inconspicuous annual herb occurs on dry slopes and mesas in coastal scrub, chaparral, and grasslands between sea level and 1,500 feet above msl (Munz 1974). This species occurs in Los Angeles, Orange, Riverside, and San Diego Counties; on Santa Catalina Island; east to Arizona; and south to Baja California and Sonora, Mexico (CNPS 2016). In the project region, this species has been reported from Plum Canyon near Cruzan Mesa and historically near Saugus approximately six and three miles from the project site, respectively (Boyd 1999). It is also known to occur in Bouquet Canyon. Palmer's grapplinghook was observed during focused plant surveys on the project site. One large population of Palmer's grapplinghook (including approximately 1,000 individuals) was observed on during focused surveys (Psomas 2016c).

5.3.22 Newhall Sunflower

Newhall sunflower (*Helianthus inexpectatus*) has a CRPR of 1B.1. It typically blooms between August and October (CNPS 2016). This species is a perennial rhizomatous herb that occurs in freshwater marshes, swamps, and riparian woodland. This species occurs in Los Angeles County

along the Santa Clara River (CNPS 2016). Although ~~potentially~~-suitable habitat for this species occurs on the project site, Newhall sunflower was not observed during focused plant surveys.

5.3.23 Los Angeles Sunflower

Los Angeles sunflower (*Helianthus nuttallii* ssp. *parishii*) has a CRPR of 1A and is presumed extinct in California. This perennial herb typically bloomed from August through October (CNPS 2016). It occurred in wet areas from approximately 1,000 to 1,500 feet above msl in Los Angeles, San Bernardino, and Orange Counties (Munz 1974). It was last observed in 1937 (Hickman 1993). A recent occurrence was reported in 2002, less than five miles from the project site, near the confluence of Santa Clara River and Castaic Creek; however, this record is currently being disputed (CDFW 2016a). ~~Potentially~~-suitable habitat for Los Angeles sunflower is present on the project site; however, it was not observed during focused plant surveys.

5.3.24 Vernal Barley

Vernal barley (*Hordeum intercedens*) has a CRPR of 3.2. It typically blooms between March and June (CNPS 2016). This annual herb occurs in vernal pools; dry, saline streambeds; and alkaline flats at elevations between sea level and 3,280 feet above msl (Hickman 1993). Vernal barley is generally a cismontane species found from San Francisco and a few areas of Kern County, extending south into Baja California, Mexico and on the Channel Islands. This species is difficult to identify and its distribution on the mainland has been known from scattered collections throughout the range of this species. In the project region, this species has been reported from Grasshopper Canyon, approximately five miles from the project site (Boyd 1999). Although ~~potentially~~-suitable habitat for this species occurs on the project site, vernal barley was not observed during focused plant surveys.

5.3.25 Mesa Horkelia

Mesa horkelia (*Horkelia cuneata* var. *puberula*) has a CRPR of 1B.1. It typically blooms between February and September (CNPS 2016). This perennial herb occurs on gravelly or sandy soils in maritime chaparral, cismontane woodland, and coastal scrub at elevations between 230 and 2,660 feet above msl. This species occurs in Los Angeles, Orange, Riverside, Santa Barbara, San Diego, Ventura, San Luis Obispo, and San Bernardino Counties (CNPS 2016). ~~Potentially~~-suitable habitat for mesa horkelia is present on the project site; however, this species was not observed during focused plant surveys.

5.3.26 Southern California Black Walnut

Southern California black walnut (*Juglans californica*) has a CRPR of 4.2. This deciduous tree occurs on slopes and canyons at elevations between 160 and 2,950 feet above msl (Hickman 1993). It is endemic to southwestern California, from Santa Barbara to San Diego Counties, and inland to western San Bernardino and Riverside Counties (CNPS 2016). In the project region, this species has been reported from lower Bouquet Canyon and other sites at lower elevations to the west and south (Boyd 1999). ~~Potentially~~-suitable habitat for Southern California black walnut is present on the project site; however, this species was not observed during focused plant surveys.

5.3.27 Southwestern Spiny Rush

Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*) has a CRPR of 4.2. This perennial rhizomatous herb occurs on coastal dunes, alkaline seeps, and coastal salt marshes between sea level and 900 feet above msl (Hickman 1993). It is known to occur in Los Angeles, Orange, Santa Barbara, San Diego, San Luis Obispo, and Ventura Counties (CNPS 2016). In the project

region, this species has been reported from areas surrounding Castaic Lagoon, approximately four miles northwest of the project site (Jepson Flora Project 2015). ~~Potentially-s~~Suitable habitat for southwestern spiny rush is not present on the project site, and this species was not observed during focused plant surveys.

5.3.28 Fragrant Pitcher Sage

Fragrant pitcher sage (*Lepechinia fragrans*) has a CRPR of 4.2. It typically blooms between March and October (Hickman 1993). This perennial herb occurs on open areas in chaparral, in dry ravines, on rocky slopes and ridgetops at elevations between 70 and 4,300 feet above msl (CNPS 2016). This species occurs in Los Angeles, Ventura, and San Bernardino Counties (Hickman 1993). Although ~~potentially~~-suitable habitat for this species occurs on the project site, fragrant pitcher sage was not observed during focused plant surveys.

5.3.29 Ross' Pitcher Sage

Ross' pitcher sage (*Lepechinia rossii*) has a CRPR of 1B.2. It typically blooms between May and September. This shrub occurs in chaparral habitats at elevations of about 1,000 to 2,600 feet above msl. It is known from Los Angeles and Ventura Counties (CNPS 2016). In the project region, this species has been reported from Ruby Canyon approximately ten miles from the project site (CDFW 2016a). Although ~~potentially~~-suitable habitat for this species occurs on the project site, Ross' pitcher sage was not observed during focused plant surveys.

5.3.30 Robinson's Pepper-Grass

Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*) has a CRPR of 4.3. It typically blooms between March and June (Hickman 1993). This annual herb occurs in openings in chaparral and sage scrub at elevations between sea level and 2,900 feet above msl. This species occurs in Los Angeles, Orange, Riverside, San Diego, Ventura, and San Bernardino Counties (Hickman 1993). Although ~~potentially~~-suitable habitat for this species occurs on the project site, Robinson's pepper-grass was not observed during focused plant surveys.

5.3.31 Ocellated Humbolt Lily

Ocellated Humbolt lily (*Lilium humboldtii* ssp. *ocellatum*) has a CRPR of 4.2. It typically blooms between March and July (CNPS 2016). This bulbiferous perennial herb occurs in gravelly soil in gulleys and canyons in chaparral and oak woodland vegetation at elevations between sea level and 3,000 feet above msl. It occurs from Santa Barbara County to the San Jacinto and Santa Ana Mountains and Santa Cruz Island (Munz 1974). In the project region, this species has been reported from Warm Springs Canyon and Lower Red Fox Canyon (Jepson Flora Project 2015), approximately seven and nine miles from the project site, respectively. ~~Potentially-s~~Suitable habitat for ocellated Humbolt lily is present on the project site; however, this species was not observed during focused plant surveys.

5.3.32 Davidson's Bush Mallow

Davidson's bush mallow (*Malacothamnus davidsonii*) has a CRPR of 1B.2. It typically blooms between June and January (CNPS 2016). This shrub occurs in sandy washes and flats in coastal sage scrub vegetation (Munz 1974) at elevations between 820 and 2,300 feet above msl (Hickman 1993). This species occurs in Los Angeles, Monterey, Santa Clara, San Luis Obispo, and San Mateo Counties (CNPS 2016). In the project region, this species has been reported from Newhall Ranch, approximately three miles from the project site (Jepson Flora Project 2015).

Although ~~potentially~~ suitable habitat for this species occurs on the project site, Davidson's bush mallow was not observed during focused plant surveys.

5.3.33 California Spineflower

California spineflower (*Mucronea californica*) has a CRPR of 4.2. It typically blooms between April and July, though it is known to bloom between March and August (CNPS 2016). This annual herb occurs in sandy soils of coastal scrub and chaparral at elevations between sea level and 4,590 feet above msl (Hickman 1993). This species is known to occur in Kern, Los Angeles, Monterey, Orange, Riverside, Santa Barbara, San Bernardino, San Diego, San Luis Obispo, and Ventura Counties. ~~Potentially~~ suitable habitat for the California spineflower is present on the project site; however, this species was not observed during focused plant surveys.

5.3.34 Spreading Navarretia

Spreading navarretia (*Navarretia fossalis*) is a federally listed Threatened species and has a CRPR of 1B.1. It typically blooms from April through June (CNPS 2016). This annual herb is typically found in vernal pools, playas with poor drainage, and other wet areas such as small drainages at elevations between 100 and 4,265 feet above msl (Hickman 1993). This species occurs in Los Angeles, Riverside, San Luis Obispo, and San Diego Counties and in Baja California, Mexico (CNPS 2016). In the project region, this species has been reported from the Cruzan Mesa, approximately seven miles from the project site (CDFW 2016a). ~~Potentially~~ suitable habitat for the spreading navarretia is marginally present in debris basins that occur in the southeastern portion of the project site, though this species was not observed during focused plant surveys.

5.3.35 Ojai Navarretia

Ojai navarretia (*Navarretia ojaiensis*) has a CRPR of 1B.1. It typically blooms between May and June (CDFW 2016a). This annual herb grows in openings in chaparral, coastal sage scrub, and grassland at elevations between approximately 825 and 1,860 feet above msl (Hickman 1993). It is known from Ventura County (CNPS 2016). In the project region, this species has been reported from the Newhall Ranch area, west of I-5 along SR-126 (Jepson Flora Project 2015, 2003 occurrence). ~~Potentially~~ suitable habitat for Ojai navarretia is present on the project site, but was not observed during focused plant surveys.

5.3.36 Piute Mountains Navarretia

Piute Mountains navarretia (*Navarretia setiloba*) has a CRPR of 1B.1. It typically blooms between April and July (CDFW 2016a). This annual grows in open depressions in clay or gravelly loam at elevations between approximately 1,640 and 6,890 feet above msl (Hickman 1993). It is known from Kern, Los Angeles, and Tulare Counties (CNPS 2016). In the project region, this species has been reported from the Cruzan Mesa, approximately seven miles from the project site (CDFW 2016a). ~~Potentially~~ suitable habitat for Piute Mountains navarretia is not present on the project site, and this species was not observed during focused plant surveys.

5.3.37 Short-Joint Beavertail

Short-joint beavertail (*Opuntia basilaris* var. *brachyclada*) has a CRPR of 1B.2. It typically blooms from April to June (CNPS 2016). This subspecies of beavertail cactus is found in chaparral, Joshua tree woodland, and desert slopes in the San Gabriel and San Bernardino mountain ranges at elevations between 4,000 and 7,500 feet above msl (Munz 1974). This species occurs in Los Angeles and San Bernardino Counties (CNPS 2016). In the project region, this species has been

reported from the ridge between Oro Fino Canyon and Quigley Canyon (approximately six miles from the project site); the southern side of Quigley Canyon (approximately six miles from the project site); and historically from Mint Canyon (approximately seven miles from the project site) (CDFW 2016a). ~~Potentially-s~~uitable habitat for short-joint beavertail is present on the project site; however, this species was not observed during focused plant surveys.

5.3.38 California Orcutt Grass

California Orcutt grass (*Orcuttia californica*) is a federally and State-listed Endangered species and has a CRPR of 1B.1. It typically blooms from April to August (CNPS 2016). This annual herb is typically found in vernal pool habitats at elevations between sea level and 2,050 feet above msl (Hickman 1993). This species is known to occur in Los Angeles, Riverside, San Diego, and Ventura Counties and in Baja California, Mexico (CNPS 2016). In the project region, this species has been reported from Newhall (approximately six miles from the project site), Cruzan Mesa (approximately seven miles from the project site), and north of Solemint (approximately six miles from the project site) (CDFW 2016a). ~~Potentially-s~~uitable habitat for California Orcutt grass is not present on the project site, and this species was not observed during focused plant surveys.

5.3.39 Hubby's Phacelia

Hubby's phacelia (*Phacelia hubbyi*) has a CRPR of 4.2. It typically blooms between January and April (CNPS 2016). This annual herb occurs in gravelly or rocky soil in coastal sage scrub, chaparral, and grassland vegetation at elevations between sea level and 3,280 feet above msl (Hickman 1993). This species is known to occur in Kern, Los Angeles, and Ventura Counties (Hickman 1993). In the project region, this species has been reported near Castaic Lake Dam, approximately three miles northwest of the project site (Jepson Flora Project 2015, 2003 record). Although ~~potentially~~-suitable habitat for this species occurs on the project site, Hubby's phacelia was not observed during focused plant surveys.

5.3.40 White Rabbit Tobacco

White rabbit tobacco (*Psuedognaphalium leucocephalum*) has a CRPR of 2B.2. It typically blooms between July and December (CNPS 2016). This perennial herb occurs in sandy or gravelly soil in coastal sage scrub, chaparral, cismontane woodland, and riparian woodland at elevations between sea level and 1,500 feet above msl (Hickman 1993). This species is known to occur in Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura Counties (CNPS 2016). In the project region, this species has been reported near Castaic Lagoon and along the Santa Clara River west of I-5, approximately four miles northwest and five miles southwest, respectively, of the project site (Jepson Flora Project 2015). Although ~~potentially~~-suitable habitat for this species occurs on the project site, white rabbit tobacco was not observed during focused plant surveys.

5.3.41 Rayless Ragwort

Rayless ragwort (*Senecio aphanactis*) has a CRPR of 2B.2. It typically blooms between January and April (CNPS 2016). This annual herb occurs in dry, open places in coastal sage scrub and chaparral vegetation (Munz 1974) at elevations between sea level and 1,300 feet above msl (Hickman 1993). This species is known from scattered locations in western California, from the San Francisco Bay area south through the coast and Central Valley, into Baja California, Mexico (Hickman 1993). In the project region, this species has historically been reported from Saugus, approximately four miles from the project site (CDFW 2016a, 1901 record). Although ~~potentially~~ suitable habitat for this species occurs on the project site, rayless ragwort was not observed during focused plant surveys.

5.3.42 Salt Spring Checkerbloom

Salt Spring checkerbloom (*Sidalcea neomexicana*) has a CRPR of 2B.2. It typically blooms between March and June (CNPS 2016). This perennial herb occurs in alkali springs and marshes in coastal sage scrub, chaparral, and creosote bush scrub at elevations between sea level and 4,920 feet above msl (Hickman 1993; Munz 1974). In California, this species occurs in Los Angeles, Orange, Riverside, and San Bernardino Counties (Munz 1974). It also occurs throughout the southwestern United States; mainland Mexico; and Baja California, Mexico (Hickman 1993). In the project region, this species has historically been reported near Elizabeth Lake and the head of San Francisquito Canyon, approximately 14 miles from the project site (Boyd 1999). **Potentially suitable** habitat for Salt Spring checkerbloom is not present on the project site, and this species was not observed during focused plant surveys.

5.3.43 Lemmon's Syntrichopappus

Lemmon's syntrichopappus (*Syntrichopappus lemmonii*) has a CRPR of 4.3. It typically blooms between April and May (CNPS 2016). This annual herb occurs in sandy to gravelly areas in chaparral and Joshua tree woodlands at elevations between 3,000 and 5,000 feet above msl (Munz 1974). This species occurs in Kern, Los Angeles, Monterey, Riverside, and San Bernardino Counties (CNPS 2016). In the project region, this species has been reported from the eastern end of the Liebre Mountains, approximately 15 miles from the project site (Boyd 1999). **Potentially suitable** habitat for this species is not present on the project site (outside the elevational range), and this species was not observed during focused plant surveys.

5.4 SPECIAL STATUS WILDLIFE

Many special status wildlife species have the potential to occur in the project region (Table 5). A brief description of these special status wildlife species and a discussion of their potential to occur on the project site follow. Note that these species are grouped by taxon and listed alphabetically according to their scientific name. Exhibit 7 shows the location of special status species on the project site.

TABLE 5
SPECIAL STATUS WILDLIFE SPECIES
POTENTIALLY OCCURRING IN THE PROJECT REGION

Species	Status		Potential for Occurrence on the Project Site
	USFWS	CDFW	
Fish			
<i>Catostomus santaanae</i> Santa Ana sucker	FT	SSC	Observed during focused surveys; suitable habitat present.
<i>Gasterosteus aculeatus williamsoni</i> unarmored threespine stickleback	FE	SE/FP	Observed during focused surveys; suitable habitat present.
<i>Gila orcutti</i> arroyo chub	—	SSC	Observed during focused surveys; suitable habitat present.
Amphibians			
<i>Anaxyrus californicus</i> arroyo toad	FE	SSC	Not expected to occur; no suitable habitat.
<i>Rana draytonii</i> California red-legged frog	FT	SSC	Not expected to occur; no suitable habitat.
<i>Spea hammondi</i> western spadefoot	—	SSC	Observed during focused surveys; suitable habitat present.

TABLE 5
SPECIAL STATUS WILDLIFE SPECIES
POTENTIALLY OCCURRING IN THE PROJECT REGION

Species	Status		Potential for Occurrence on the Project Site
	USFWS	CDFW	
Reptiles			
<i>Anniella pulchra</i> silvery legless lizard	—	SSC	Observed; suitable habitat.
<i>Aspidoscelis tigris stejnegeri</i> coastal whiptail	—	SSC	Expected to occur; potentially suitable habitat present.
<i>Emys marmorata</i> western pond turtle	—	SSC	Not expected to occur; no suitable habitat.
<i>Phrynosoma blainvillii</i> coast horned lizard	—	SSC	Observed; suitable habitat.
<i>Salvadora hexalepis virgultea</i> coast patch-nosed snake	—	SSC	Expected to occur; potentially suitable habitat present.
<i>Thamnophis hammondi</i> two-striped garter snake	—	SSC	May occur; potentially suitable habitat present.
Birds			
<i>Agelaius tricolor</i> tricolored blackbird	FC	SSC	May occur; potential suitable foraging habitat , not expected to occur for breeding due to lack of suitable habitat.
<i>Ammodramus savannarum</i> grasshopper sparrow	—	SSC	May occur; suitable foraging habitat and limited suitable nesting habitat.
<i>Aquila chrysaetos</i> golden eagle	—	FP	May occur; suitable foraging habitat and limited suitable nesting habitat.
<i>Asio otus</i> (Nesting) long-eared owl	—	SSC	May occur; suitable foraging and potentially suitable nesting habitat.
<i>Athene cunicularia</i> burrowing owl	—	SSC	May occur; potentially suitable habitat present. Not detected during focused burrow surveys in 2007.
<i>Buteo swainsoni</i> Swainson's hawk	—	ST	Not expected to occur for nesting but may occur as a rare migrant; potentially suitable foraging habitat.
<i>Circus cyaneus</i> northern harrier	—	SSC	Observed; suitable foraging and potentially suitable nesting habitat.
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	FT	SE	Not expected to occur; no suitable habitat.
<i>Elanus leucurus</i> white-tailed kite	—	FP	Observed; suitable foraging and nesting habitat.
<i>Empidonax traillii extimus</i> southwestern willow flycatcher	FE	SE	Not expected to occur; no suitable habitat.

TABLE 5
SPECIAL STATUS WILDLIFE SPECIES
POTENTIALLY OCCURRING IN THE PROJECT REGION

Species	Status		Potential for Occurrence on the Project Site
	USFWS	CDFW	
<i>Gymnogyps californianus</i> California condor	FE	SE	Not expected to occur; no suitable breeding habitat. Incidental sightings of flyovers have been noted, but this species is expected to occur only from relatively rare flyover occurrences compared with core habitat in the adjacent mountains to the north.
<i>Icteria virens</i> yellow-breasted chat	—	SSC	Not expected to occur for nesting but may occur as a migrant; no suitable nesting habitat.
<i>Lanius ludovicianus</i> loggerhead shrike	—	SSC	Observed; suitable habitat; nesting on site during 2008 coastal California gnatcatcher focused surveys (BonTerra 2008).
<i>Poliophtila californica</i> coastal California gnatcatcher	FT	SSC	Observed; one individual dispersing juvenile observed during focused surveys in 2015 (no breeding pair detected) (BonTerra 2015); not expected to occur for breeding due to negative results during repeated focused surveys; potentially suitable habitat.
<i>Setophaga petechia</i> yellow warbler	—	SSC	Not expected to occur for nesting but expected to occur as migrant; no suitable nesting habitat.
<i>Vireo bellii pusillus</i> least Bell's vireo	FE	SE	Not expected to occur; no suitable nesting habitat.
Mammals			
<i>Antrozous pallidus</i> pallid bat	—	SSC	May occur; potentially suitable foraging and roosting habitat.
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	—	SC/SSC	May occur for foraging only; potentially suitable foraging, but no suitable roosting habitat.
<i>Euderma maculatum</i> spotted bat	—	SSC	May occur; potentially suitable foraging, but limited roosting habitat.
<i>Eumops perotis californicus</i> western mastiff bat	—	SSC	May occur for foraging only; potentially suitable foraging, but no suitable roosting habitat.
<i>Lepus californicus bennettii</i> San Diego black-tailed jackrabbit	—	SSC	Expected to occur; potentially suitable habitat present.
<i>Macrotis californicus</i> California leaf-nosed bat	—	SSC	Not expected to occur; potentially suitable foraging habitat, but no suitable roosting habitat; outside known range.

TABLE 5
SPECIAL STATUS WILDLIFE SPECIES
POTENTIALLY OCCURRING IN THE PROJECT REGION

Species	Status		Potential for Occurrence on the Project Site
	USFWS	CDFW	
<i>Onychomys torridus ramona</i> southern grasshopper mouse	—	SSC	May occur; potentially suitable habitat present.
USFWS: U.S. Fish and Wildlife Service; CDFW: California Department of Fish and Wildlife.			
LEGEND			
Federal (USFWS)		State (CDFW)	
FE	Endangered	SE	Endangered
FT	Threatened	ST	Threatened
FC	Candidate Species	SSC	Species of Special Concern
		FP	Fully Protected
		SC	Candidate Species

5.4.1 Fish

Santa Ana Sucker

Santa Ana sucker is a federally listed Threatened species and a California Species of Special Concern. This fish is found in small, shallow streams with currents that run from swift to sluggish. They are most abundant where waters are cool and unpolluted, although they can withstand turbidity. They are also associated with bottom materials of boulders, rubble, and sand where there is filamentous algae growth. They feed on algae and detritus that they scrape from rock surfaces and occasionally take aquatic insect larvae. The only populations that are federally protected are those in its historic range, which consists of the Los Angeles, San Gabriel, and Santa Ana River Basins. The population in the Santa Clara River Basin is considered to be introduced and is not covered by the protected status, although those in the Santa Clara River are considered important to the recovery of the species in its native range. This species is known to occur in the Santa Clara River from San Francisquito Canyon to Santa Paula (CDFW 2016a). Suitable habitat for this species is present on the project site, and juvenile Santa Ana suckers were captured during the focused fish surveys (BonTerra 2005b; see Appendix F). Therefore, there was evidence that the Santa Ana sucker had bred on or near the project site.

On December 14, 2010, the USFWS published the current Final Rule designating 9,331 acres of land as critical habitat for the Santa Ana sucker in the Santa Ana River in San Bernardino, Riverside, and Orange Counties and the San Gabriel River and Big Tujunga Creek in Los Angeles County (USFWS 2010a). The project area is not located within designated critical habitat area for the Santa Ana sucker.

Unarmored Threespine Stickleback

Unarmored threespine stickleback is a federally and State-listed Endangered species and a California Fully Protected species. It occurs in weedy, permanent pools or backwaters and in slow-moving water along the margins of a stream. It primarily occurs in cool and clear water with mud or sand substrates. The unarmored threespine stickleback was once abundant throughout the Los Angeles Basin and is now known to occur only in the upper Santa Clara River system and in San Antonio Creek in northern Santa Barbara County. Its regional decline is attributable to the channelization of watersheds for flood control and development and disruption of drainages by urbanization. This species occurs along the Santa Clara River from approximately .5 miles west of the I-5 freeway crossing to just east of the I-5 freeway (approximately three miles from

the project site), San Francisquito Canyon (approximately four miles from the project site), Soledad Canyon (approximately four miles from the project site), and Bouquet Creek (approximately five miles from the project site) (CDFW 2016a). One adult unarmored threespine stickleback was captured during the focused fish surveys. During the survey, there was no evidence that sticklebacks had bred on the project site. However, the 2004–2005 rainy season was unusually heavy and had delayed reproduction elsewhere in the Santa Clara River; consequently, stickleback reproduction may have occurred in or adjacent to the project site following the survey (BonTerra 2005b; see Appendix F).

On November 17, 1980, the USFWS published a Proposed Rule to designate critical habitat for the federally Endangered unarmored threespine stickleback (USFWS 1980). These lands include three zones in Los Angeles County (Del Valle, San Francisquito Canyon, and Soledad Canyon) and one zone in Santa Barbara County (San Antonio Creek). However, on September 17, 2002, the critical habitat designation was vacated, and the decision was made not to finalize the proposed critical habitat (USFWS 2002).

Arroyo Chub

Arroyo chub is a California Species of Special Concern. It is a small, freshwater fish that is found in coastal freshwater streams and rivers with steady current and emergent vegetation. This chub is an omnivorous species that forms schools and prefers slower-moving pools in streams. The chub has adapted to survive in widely fluctuating water temperatures and dissolved oxygen levels. The arroyo chub is now common at only three of its native locations: Santa Margarita and De Luz Creeks in San Diego County; Trabuco and San Juan Creeks in Orange County; and Malibu Creek in Los Angeles County (Swift et al. 1993). The chub has also been introduced into several rivers and streams in Southern California. This species is known to occur in the Santa Clara River, within approximately four miles of the project site (CDFW 2016a). The resource agencies consider the Santa Clara River population to be introduced (Moyle et al. 2015). There is suitable habitat for this species on the project site, and arroyo chub were found throughout the survey area during focused fish surveys (BonTerra 2005b; see Appendix F). All life stages were present: fry, transformed fry, juveniles, and adults. Therefore, there is evidence that arroyo chub has bred on the project site.

5.4.2 Amphibians

Arroyo Toad

Arroyo toad (*Anaxyrus californicus*) is a federally listed Endangered species and a California Species of Special Concern. This species historically occurred from San Luis Obispo County south to San Diego County along most major rivers. Currently, they are restricted to very small remnant populations in these rivers' headwaters. Most of the remaining populations occur in national forests. The arroyo toad is generally found in semi-arid regions near washes or intermittent streams (Zeiner et al. 1988) from sea level to approximately 3,000 feet above msl. However, this species has highly specialized habitat requirements (such as breeding pools within approximately 300 feet of juvenile and adult habitat), which consist of a shoreline with stable, sandy terraces (Jennings and Hayes 1994). The arroyo toad is known to occur along the Santa Clara River east of I-5, approximately four miles from the project site (CDFW 2016a). Suitable habitat (hydrology) for this species is not present on the project site; therefore, arroyo toad is not expected to occur on the project site.

On February 9, 2011, the USFWS published a Final Rule to designate critical habitat for the federally Endangered arroyo toad (USFWS 2011). This included approximately 98,366 acres in

Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego Counties. The project site is not located in the final critical habitat for this species.

California Red-Legged Frog

California red-legged frog (*Rana draytonii*) is a federally listed Threatened species and a California Species of Special Concern. This species historically occurred throughout coastal California, west of the Sierras, from sea level to 8,000 feet above msl. This frog has been extirpated from approximately 70 percent of its historic range and now primarily occurs only in wetlands and streams of central California (USFWS 2010b). This species prefers areas with deep ponds in areas of streams that have slow water flow with emergent vegetation at the edge of the banks (Jennings and Hayes 1994). Adults feed primarily on aquatic and terrestrial invertebrates. This species is known to occur in San Francisquito Canyon, approximately 1.3 miles upstream from the San Francisquito Powerhouse No. 2 Penstocks (CDFW 2016a). Suitable habitat for this species is not present on the project site; therefore, California red-legged frog is not expected to occur on the project site.

On March 17, 2010, the USFWS published the current Final Rule designating 1,636,609 acres of land as critical habitat for the California red-legged frog in 27 California counties including Los Angeles County. The Project site is not located within final critical habitat designations for this species.

Western Spadefoot

Western spadefoot is a California Species of Special Concern. This species occurs in the Great Valley and bordering foothills and in the Coast Ranges from Monterey Bay south to Baja California, Mexico. From the Santa Clara River Valley in Los Angeles and Ventura Counties southward, an estimated 80 percent of habitat for this species has been lost. This species inhabits grassland, coastal sage scrub, and other habitats with open sandy, gravelly soils. The western spadefoot is primarily a species of the lowlands and frequents washes, floodplains of rivers, alluvial fans, and alkali flats (Stebbins 2003). Western spadefoot breed in quiet streams, vernal pools, and temporary ponds. This species is rarely seen outside the breeding season. This species is known to occur in Cruzan Mesa (approximately 7.0 miles from the project site); Golden Valley Ranch (approximately 9.0 miles from the project site); north of Tapia Canyon (approximately 0.8 miles from the project site) and San Francisquito, Plum, and Soledad Canyons (approximately 0.5, 5.0, and 4.0 miles, respectively) from the project site (CDFW 2016a). Western spadefoot tadpoles were observed in several pools in an unnamed drainage at one locality in the southwestern portion of the project site (Exhibit 7). Approximately ten such pools formed following heavy rains and appeared to retain water of sufficient depth and duration for western spadefoot breeding. Surveys determined that western spadefoot breeding had occurred in seven of the larger pools. Several hundred tadpoles were observed in each pool for a total of a few thousand amongst all the pools; however, no attempt was made to quantify the total number of tadpoles present. The pools are immediately adjacent to coastal sage scrub and chaparral vegetation, which represents the nearest suitable habitat for adult western spadefoot (BonTerra 2005a).

Adult western spadefoot may also occupy other suitable habitat elsewhere on the project site, and may not have been detected due to the absence of localized breeding activity at a breeding pool. Therefore, all suitable habitats should be considered occupied by the western spadefoot. This includes the alluvial scrub, sage scrub, chamise chaparral–sage scrub, sage scrub/ annual grassland, and California annual grassland vegetation types.

5.4.3 Reptiles

Silvery Legless Lizard

Silvery legless lizard (*Anniella pulchra pulchra*) is a California Species of Special Concern. It occurs in the Coast, Transverse, and Peninsular Ranges from Contra Costa County south to Baja California, Mexico. It is a small, secretive lizard that spends most of its life beneath the soil; under stones, logs, and debris; or in leaf litter. The silvery legless lizard requires areas with loose, sandy soil, moisture, warmth, and plant cover. It occurs in chaparral, pine-oak woodland, beach, and riparian vegetation types at elevations ranging from sea level to about 5,100 feet above msl (Stebbins 2003). This species is naturally rare since it specializes in substrates with high sand content, but is also threatened by grazing, off-road vehicle activity, sand mining, beach erosion, excessive recreational use of coastal dunes, and the introduction of exotic plants (Jennings and Hayes 1994). This species formerly occurred in and was relocated from Plum Canyon, approximately five miles from the project site (CDFW 2016a). The project site provides suitable habitat for this species, and silvery legless lizard was observed on the project site.

Coastal Whiptail

Coastal whiptail (*Aspidoscelis tigris stejnegeri*) is a California Species of Special Concern. This whiptail lizard occurs in the coastal region of southern California south to central Baja California, Mexico (Stebbins 2003). This lizard is a moderately large, slender lizard that is most common in and around dense vegetation especially where the substrate is sandy or gravelly (Zeiner et al. 1988). It occurs in areas where the ground is firm, sandy, or rocky (Stebbins 2003). This species is threatened by loss of habitat (Jennings and Hayes 1994). This species is known from west of Bouquet Canyon (approximately 4.5 miles from the project site), south of Saugus (approximately 5 miles from the project site), and it was observed in the project area. Suitable habitat is present in the sage scrub vegetation types in the project area.

Western Pond Turtle

Western pond turtle (*Emys marmorata*) is a California Species of Special Concern. This subspecies occurs from approximately the San Francisco Bay area south through the Coast Ranges to Northern Baja California, Mexico from sea level to 6,700 feet above msl. The western pond turtle is estimated to be in decline throughout 75 to 80 percent of its range (Stebbins 2003). The current range is similar to the historic range, but populations have become fragmented by agriculture and urban development. The western pond turtle occurs primarily in freshwater rivers, streams, lakes, ponds, vernal pools, and seasonal wetlands with basking sites such as logs, banks, or other suitable areas above the water level. In addition to loss of habitat, this species is also threatened by grazing, non-native species, and disease (Jennings and Hayes 1994). This species has been reported from San Francisquito Canyon (approximately 3 miles from the project site), and from the Santa Clara River (approximately 4 miles from the project site) project region (CDFW 2016a). Suitable habitat for this species is not present on the project site; therefore, western pond turtle is not expected to occur.

Coast Horned Lizard

Coast horned lizard (*Phrynosoma blainvillii*) is a California Species of Special Concern. The two former subspecies of the coast horned lizard (*P. coronatum blainvillei* and *P. c. frontale*) are no longer recognized as valid, based on current scientific studies on this species. The coast horned lizard occurs throughout much of California, west of the desert and Cascade-Sierra Highlands south to Baja California, Mexico. However, many of the populations in lowland areas have been reduced or eliminated due to urbanization and agricultural expansion. It is a small, spiny,

somewhat rounded lizard that occurs in scrubland, grassland, coniferous forests, and broadleaf woodland vegetation types. The coast horned lizard prefers open areas for basking and loose, friable soil for burrowing (Stebbins 2003). Three factors have contributed to its decline: loss of habitat, overcollecting, and the introduction of exotic ants. In some places, especially adjacent to urban areas, the introduced ants have displaced the native species upon which the lizard feeds (Hix 1990). In addition, this species is also threatened by fires; off-road vehicles; grazing; and pets, especially domestic cats (Jennings and Hayes 1994). This species is known historically from Saugus and Tick Canyon, approximately four and ten miles from the project site, respectively (CDFW 2016a; 1934 and 1955 records, respectively). Suitable habitat is present and coast horned lizard was observed on the project site.

Coast Patch-Nosed Snake

Coast patch-nosed snake (*Salvadora hexalepis virgulata*) is a California Species of Special Concern. It ranges along the coast of California from San Luis Obispo County south into Baja California, Mexico. It occurs from sea level to about 7,000 feet above msl (Stebbins 2003). It inhabits open sandy areas and rocky outcrops in scrub, chaparral, grassland, and woodland vegetation types. This species is threatened by development, grazing, and fire control (Jennings and Hayes 1994). It has been recorded in Hopper Creek, northwest of Piru Creek (approximately 15 miles) from the project site (CDFW 2016a). ~~Potentially s~~Suitable habitat for this species is present on the project site. Therefore, coast patch-nosed snake is expected to occur on the project site.

Two-Striped Garter Snake

Two-striped garter snake (*Thamnophis hammondi*) is a California Species of Special Concern. It occurs from Monterey County south to Rio Rosario in Baja California, Mexico from sea level to 8,000 feet above msl. Two-striped garter snake is highly aquatic and is found in riparian habitats, including oak woodland, brushlands, and sparse coniferous forests (Stebbins 2003). The two-striped garter snake feeds on small fishes, frogs, tadpoles, and earthworms. This species is known to occur in Oak Spring Canyon, Del Sur Ridge, and Castaic Creek (approximately ten miles, 8 miles, and 8.5 miles respectively) from the project site (CDFW 2016a). ~~Potentially s~~Suitable habitat for this species is present in San Francisquito Canyon. Therefore, two-striped garter snake may occur on the project site.

5.4.4 Birds

Tricolored Blackbird

Tricolored blackbird (*Agelaius tricolor*) is a federal Candidate for listing and a California Species of Special Concern. Tricolored blackbird is almost a California endemic, with only small, scattered colonies breeding north to eastern Washington and south to Baja California Norte. The species principally concentrates in the Central Valley of California and central and southern coastal counties (Allen et al. 2016). These colonial nesting birds prefer to breed in marsh vegetation of bulrushes and cattails; in riparian woodlands containing native (willows or cottonwood) or introduced plants (giant reed or salt cedar [*Tamarisk* sp.]); or at upland sites containing stands of blackberries (*Rubus ursinus*), nettles, thistles, or crops such as wheat or barley (Beedy and Hamilton 1999). During winter months, they are often found foraging in wet pastures, agricultural fields, and seasonal wetlands. Tricolored blackbirds are nomadic, wandering during the nonbreeding season and occupying colony sites intermittently (Unitt 1984). This species is known to breed near Lake Hughes (approximately 14 miles) from the project site (CDFW 2016a). ~~Potentially s~~Suitable foraging habitat and limited marginal nesting habitat is present in the riparian

and grassland vegetation types on the project site. Tricolored blackbird may occur for foraging, but is not expected to nest on the project site due to limited suitable nest sites.

Grasshopper Sparrow

Grasshopper sparrow (*Ammodramus savannarum*) is a California Species of Special Concern. Grasshopper sparrow primarily nests in the eastern United States; however, its western breeding distribution includes eastern Washington, southern Idaho, southwestern Wyoming, and the western coastal counties and western edge of the Sierra Nevada of California and the northern portion of Baja California, Mexico (Vickery 1996). Grasshopper sparrow generally prefers moderately open grasslands and prairies with patchy bare ground. In the West and Southwest, grasshopper sparrow occupies lush areas with shrub cover in arid grasslands (Allen et al. 2016). This species is threatened by habitat loss, fragmentation, and degradation (Vickery 1996). Suitable foraging and some nesting habitat for this species is present on the project site, and it has been reported in the region (CDFW 2016a). Therefore, the grasshopper sparrow may occur on the project site.

Golden Eagle

Golden eagle (*Aquila chrysaetos*) is a California Fully Protected species and is also protected by the Federal Bald Eagle Act. This raptor is an uncommon year-round resident in Southern California, occupying the more remote and rugged areas of the desert-slope portions of Los Angeles County; it is extremely rare on the coastal slope and uncommon to rare visitor from November to April in the Antelope Valley (Garrett and Dunn 1981; Allen et al. 2016). The golden eagle prefers open habitats such as grasslands, rangelands, and agricultural fields. It typically nests on rocky cliff ledges or trees and rarely on the ground (Kaufman 1996; Baichich and Harrison 1997). Characteristic habitat throughout the west involves sagebrush or prairie grasslands in areas where cliffs or riparian corridors provide nest sites (Allen et al. 2016). Possible threats to this species include habitat destruction, shooting, human disturbance at nest sites, wind turbine strikes, electrocution on power poles, and rodenticide poisoning (Allen et al. 2016). The golden eagle is known to breed historically in the project region, but these areas have since been abandoned (Allen et al. 2016). Suitable foraging habitat for this species is present on the project site. However, only limited nesting habitat is present; therefore, the golden eagle may occur on the project site.

Long-Eared Owl

Long-eared owl (*Asio otus*) is a California Species of Special Concern. In Southern California this species is a rare and local summer resident in riparian areas of the desert slope and in ranch yards of the Antelope Valley; possibly not present every year (Allen et al. 2016). It is an uncommon winter visitor to thickly treed areas of the Antelope Valley (Allen et al. 2016). In Southern California, this species nests in oak and willow woodlands and forages in scrub and grassland vegetation types. Long-eared owls have declined throughout California due to urban and agricultural development (Bloom 1999). Suitable foraging and ~~potentially s~~ Suitable nesting habitat for this species occur on the project site. Long-eared owl may occur on the project site.

Burrowing Owl

Burrowing owl is a California Species of Special Concern. Although the burrowing owl was proposed as a State Candidate for listing, the CDFW determined that the species did not warrant listing in consideration of its population throughout the state. However, this species is considered a Species of Local Concern because it is much less common in Southern California than in the Central Valley. In Southern California, burrowing owls breed and forage in grasslands and prefer

flat to low rolling hills in treeless terrain. They are small owls that nest in burrows, typically in open habitats, most often along banks and roadsides. The burrowing owl is a widespread species throughout the western United States, but has declined in many other areas due to habitat modification from grasslands to farmsteads and urban development, a shift from row-cropped farmland to alfalfa cultivation, poisoning of its prey items, shooting, and human disturbance (Remsen 1978; Allen et al. 2016). This species is known to occur along the Santa Clara River in Soledad Canyon, San Francisquito Canyon, and Grasshopper Canyon (approximately seven, two, and five miles respectively) from the project site (CDFW 2016a). A habitat assessment and focused burrow survey for the species was conducted on the project site on April 5, 2007. No burrows potentially occupied by the burrowing owl were found on the project site (BonTerra 2007; see Appendix I). Considerable regrowth of vegetation has occurred since the 2002 Copper Fire, and the amount of low density revegetation currently on site is very limited. Therefore, suitable habitat for this species is not currently present on the project site and the burrowing owl is not expected to inhabit the site at this time. Future disturbance on the site may create suitable conditions for the presence of this species. Implementation of MM 6 will reduce any potentially significant impacts to a less than significant level.

Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is a State-listed Threatened species. This raptor is a very rare migrant along the coast of Southern California (Garrett and Dunn 1981). The Swainson's hawk formerly bred along the coast in Southern California, but breeding is now mostly limited to the Sacramento and San Joaquin Valleys, extreme northeastern California, and in Mono and Inyo Counties (England et al. 1997). It has recently bred in the Antelope Valley, Los Angeles County, and in the western Mojave Desert. Typical breeding habitat consists of open areas such as grasslands and agricultural fields with scattered groves of trees. Prey consists of small mammals and reptiles in early summer and large insects at other seasons (Kaufman 1996). This species is threatened by loss of habitat, habitat deterioration in its South American wintering grounds, human disturbance at nest sites, shooting, and possibly pesticides (Remsen 1978). Additionally, any reduction in alfalfa production in the Antelope Valley poses a risk to this species, as does rodenticide poisoning (Allen et al. 2016). ~~Potentially-s~~Suitable foraging, but no suitable nesting habitat for this species occurs on the project site. Swainson's hawk may occur as a rare migrant on the project site, but this species is not expected to nest there.

Northern Harrier

Northern harrier is a California Species of Special Concern. It is an uncommon and local year-round resident of marshy, open areas, but rare in the summer (Allen et al. 2016). This species nests on the ground in a variety of wetland and upland habitats (MacWhirter and Bildstein 1996). Northern harrier can be seen foraging in scrub, riparian, and grassland vegetation types. While once a relatively common species during fall, winter, and spring in undeveloped areas of Los Angeles County, the northern harrier population is now greatly reduced and localized in distribution. This species is threatened by pesticides (Ehrlich et al. 1988) and loss of suitable habitat especially in wetland and grassland areas along the coastal-slope and upland habitat in Antelope Valley (Allen et al. 2016). Suitable foraging ~~habitat~~ and ~~potentially-suitable~~ nesting habitat is present on the project site. Northern harrier was observed foraging on the project site, and it may nest on the project site.

Western Yellow-Billed Cuckoo

Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) is a federally-listed Threatened and a State-listed Endangered species. There is currently no designated Critical Habitat for this species. California's population of western yellow-billed cuckoo was once estimated to be over

15,000 pairs, but in less than 100 years, it has declined to less than 30 pairs with most cuckoos concentrated at 3 locations: the Sacramento River, the South Fork of the Kern River, and the lower Colorado River (Hughes 1999). Cuckoos appear to have been extirpated from other locations such as at the Santa Ana River in the Prado Basin where small numbers (three to seven) were reported annually prior to 1995 (Pike et al. 2004). Breeding western yellow-billed cuckoos require relatively large (i.e., greater than 20 hectares or 50 acres) contiguous patches of multilayered riparian habitats (Daw 2014). They require broad areas of old-growth riparian vegetation dominated by willows and Fremont's cottonwoods with dense understories. The project site does not provide riparian habitat extensive enough to be suitable for the western yellow-billed cuckoo. The riparian habitat is sparse and patchy; therefore, the western yellow-billed cuckoo is not expected to occur.

White-Tailed Kite

White-tailed kite is a California Fully Protected species. This species is an uncommon to locally fairly common resident in coastal Southern California and is a rare visitor and local nester on the western edge of the deserts (Garrett and Dunn 1981). Kites nest primarily in oaks, willows, and sycamores and forage in grassland and scrub vegetation types. White-tailed kites show strong site fidelity to nest groves and trees. This species is known to have nested along the Santa Clara River east of I-5, approximately three miles from the project site (CDFW 2016a). The white-tailed kite was observed foraging, and **potentially** suitable nesting habitat occurs on the project site.

Southwestern Willow Flycatcher

Southwestern willow flycatcher (*Empidonax traillii extimus*) is a federally and State-listed Endangered species. This subspecies was once considered a common breeder in coastal Southern California. However, this subspecies has declined drastically due to a loss of breeding habitat and nest parasitism by the brown-headed cowbird (*Molothrus ater*). This species occurs in riparian habitats along rivers, streams, or other wetlands where dense growth of willows, mule fat, arrow weed (*Pluchea sericea*), tamarisk, or other plants are present, often with a scattered overstory of cottonwood (USFWS 1995). The project site does not support enough cottonwood woodland and willow scrub habitats to constitute suitable nesting habitat for this species. Therefore, southwestern willow flycatcher is not expected to occur on the project site.

Critical Habitat for this species was originally designated on July 22, 1997, and was updated on October 19, 2005. In 2007, the USFWS announced that it would review the 2005 designation; then, in November 2007, the USFWS declared that it would maintain the 2005 designation. The USFWS designated final Critical Habitat in Arizona, California, Nevada, New Mexico, and Utah. Counties containing Critical Habitat in California include Kern, Santa Barbara, San Bernardino, and San Diego. Of the 48,896 USFWS-designated acres of Critical Habitat for the southwestern willow flycatcher, 17,212 acres are located in California (USFWS 2013). The Project site is not located within the final 2013 USFWS-designated Critical Habitat.

California Condor

The California condor (*Gymnogyps californianus*) is a federally and State-listed Endangered Species. Suitable habitat for the condor includes adequate food supply, open areas to locate food, and reliable air movements to allow for extending soaring. Foraging habitat consists of vast expanses of open savannah and grassland, including potreros (cattle ranches or pastures) within chaparral with cliffs, large trees, and snags that are often separated by far distances from the nesting sites. Roosting habitat is located near important foraging grounds often near a previously discovered carcass. Nesting habitat ranges from chaparral to forested montane regions, including redwood forests. The California condor nests in caves, crevices, and large ledges on high

sandstone cliffs. Expending very little energy, these scavengers soar on thermal updrafts and wind currents until they spot potential food sources. The majority of the breeding birds forage within 50 to 70 kilometers (km, 31 to 43.5 miles [mi]) of their nesting areas, with core foraging areas ranging from 2,500 to 2,800 square kilometers (617,763.5 to 691,895 acres [ac]) (Bloom 2008).

On September 24, 1976, the USFWS designated Critical Habitat for the condor consisting of 9 areas encompassing approximately 600,000 acres (USFWS 1976). These areas occur in the following counties: Tulare, San Luis Obispo, Ventura, Kern, Santa Barbara, and Los Angeles. The project site is not located within designated critical habitat for this species.

Yellow-Breasted Chat

Yellow-breasted chat (*Icteria virens*) is a California Species of Special Concern. This species occurs as an uncommon and local summer resident in Southern California along the coast and in the deserts (Garrett and Dunn 1981). This large warbler was once a fairly common summer resident in riparian woodlands throughout California, but is now much reduced in numbers, especially in Southern California. For nesting, this species requires dense, brushy tangles near water and riparian woodlands supporting a thick understory. This species is threatened by loss of breeding habitat (especially the channelization of major rivers) and possibly nest parasitism by the brown-headed cowbird (Remsen 1978; Allen et al. 2016). This species is known to occur along the Santa Clara River (CDFW 2016a). The project site does not provide riparian habitat extensive enough to be suitable nesting habitat for the yellow-breasted chat, as the riparian habitat on site is sparse and patchy. Therefore, the yellow-breasted chat is not expected to occur for nesting, but may occur as a migrant.

Loggerhead Shrike

Loggerhead shrike (*Lanius ludovicianus*) is a California Species of Special Concern. This species is a fairly common resident of lowlands and foothills in Southern California. Shrikes inhabit grasslands and other dry, open habitats. They can often be found perched on fences and posts from which prey items (e.g., large insects, small mammals, lizards) can be seen. This species may be threatened by habitat loss in the Santa Clarita Valley; predation by Cooper's hawks; competition from urbanized species such as European starling and American kestrel; and pesticides (Ehrlich et al. 1988; Allen et al. 2016). Suitable habitat for this species is present on the project site. Loggerhead shrike was observed nesting on the project site during the 2008 focused California gnatcatcher surveys (BonTerra 2008).

Coastal California Gnatcatcher

Coastal California gnatcatcher is a federally listed Threatened species and a California Species of Special Concern. This species occurs in most of Baja California's arid regions, but is extremely localized in the United States where it predominantly occurs in coastal regions of highly urbanized Los Angeles, Orange, Riverside, and San Diego Counties (Atwood 1992). In California, this species is an obligate resident of several distinct subassociations of the coastal sage scrub vegetation type. Loss of optimal coastal sage scrub breeding habitat to urbanization and brood parasitism by brown-headed cowbirds have been cited as causes of the coastal California gnatcatcher population decline (Unitt 1984; Atwood 1990; Allen et al. 2016). This species is known to occur on Golden Valley Ranch (approximately nine miles from the project site), Robinson Ranch Golf Course (approximately nine miles from the project site), and near the intersection of Lowridge Place and San Francisquito Canyon Road (approximately one mile from the project site), at Copper Hill Drive at Bouquet Canyon (approximately 3 miles from the project site), and in Bee Canyon (approximately 11 miles from the project site) (CDFW 2016a). The project site

contains approximately 327 acres of ~~potentially~~-suitable habitat for the species. Focused surveys performed in 2015 did not identify any nesting behavior, but a solitary individual gnatcatcher (presumed to be a dispersing juvenile) was observed during the final survey date. Previous focused surveys performed in 2005 and 2008 did not detect the presence of any gnatcatchers (BonTerra 2008, 2005d). Reports of all three focused survey efforts are provided in Appendix H.

On December 19, 2007, the USFWS published a final rule revising critical habitat for the coastal California gnatcatcher (USFWS 2007). The revised critical habitat designates 197,303 acres of land in Ventura, Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties. The project site is not within the revised designated critical habitat for this species.

Yellow Warbler

Yellow warbler (*Setophaga petechia*) is a California Species of Special Concern. *Dendroica petechia brewsteri* is the subspecies of yellow warbler that breeds in Southern California; most yellow warblers are migrants. This subspecies occurs in coastal areas from northwestern Washington south to western Baja California, Mexico (Dunn and Garrett 1997). In Southern California, yellow warblers breed locally in riparian woodlands, but, during migration, they can forage in a variety of different habitat types. This species is threatened by loss of breeding habitat (specifically channelization of our major watercourses) and nest parasitism by brown-headed cowbirds (Remsen 1978; Allen et al. 2016). This species is known to occur along the Santa Clara River (CDFW 2016a). The project site does not have riparian habitat extensive enough to provide suitable nesting habitat for the yellow warbler since the riparian habitat on site is sparse and patchy; therefore, the yellow warbler is not expected to occur for nesting, but is expected to occur as a migrant.

Least Bell's Vireo

Least Bell's vireo (*Vireo bellii pusillus*) is a federally and State-listed Endangered species. The vireo is now a rare and local summer resident of Southern California's lowland riparian woodlands. While destruction of lowland riparian habitats has played a large role in driving this species to its present precarious situation, brood parasitism by brown-headed cowbirds is the most important factor in its decline (Garrett and Dunn 1981). Local cowbird-control programs have been very effective in maintaining some populations (Small 1994), and the species has begun to recover. The least Bell's vireo breeds primarily in riparian habitats dominated by willows with dense understory vegetation (USFWS 1986). A dense shrub layer two to ten feet above ground is the most important habitat characteristic for this species (Goldwasser 1981; Franzreb 1989). This species is known to occur along Castaic Creek and in the vicinity of Grasshopper Canyon, approximately four and five miles from the project site, respectively (CDFW 2016a). The project site does not support enough cottonwood woodland and willow scrub habitats to constitute suitable nesting habitat for this species; therefore, least Bell's vireo is not expected to occur on the project site.

On February 2, 1994, the USFWS published final critical habitat for the least Bell's vireo, designating approximately 37,560 acres of land in Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, and San Diego Counties. Designated critical habitat in Los Angeles County is located only along the Santa Clara River from I-5 west to the Ventura County line (USFWS 1994). The project site is not located in the designated critical habitat for this species.

5.4.5 Mammals

Pallid Bat

Pallid bat (*Antrozous pallidus*) is a California Species of Special Concern. This species occurs throughout California except for the high Sierra Nevada from Shasta to Kern Counties and in the northwestern portion of the state (Zeiner et al. 1990b). It most commonly occurs in mixed oak and grassland habitats. This large bat roosts in rock crevices and in tree cavities of trees, especially in oaks. The pallid bat is very sensitive to disturbance at its roosting sites (CDFG 2002). This species is known historically in the vicinity of Castaic, approximately three miles from the project site (CDFW 2016a). The project site provides ~~potentially~~ suitable foraging and roosting habitat for this species. Therefore, pallid bat may occur on the project site for foraging and roosting.

Townsend's Big-Eared Bat

Townsend's big-eared bat (*Corynorhinus townsendii*) is a State Candidate for listing and California Species of Special Concern. Townsend's big-eared bat is considered an uncommon year-round resident throughout much of California (Zeiner et al. 1990b). Townsend's big-eared bat occupies a variety of habitats, including oak woodlands, arid deserts, grasslands, and high-elevation forests and meadows (Hall 1981). Known roosting sites in California include mine tunnels, limestone caves, lava tubes, buildings, and other man-made structures. The roosts, especially larger breeding colonies, are especially susceptible to disturbance (Williams 1986). This species is known historically from Tick Canyon, approximately 9 miles from the project site (CDFW 2016a). The project site provides ~~potentially~~ suitable foraging habitat but no suitable roosting habitat for the Townsend's big-eared bat. Therefore, Townsend's big-eared bat may occur on the project site for foraging but is not expected to roost on the project site.

Spotted Bat

Spotted bat (*Euderma maculatum*) is a California Species of Special Concern. It is a rare species that is very striking in appearance but poorly known. This species may be considered one of North America's rarest mammals (CDFG 1991). Although more widespread in the deserts of Southern California, the range of the spotted bat includes parts of the coastal slope of the Transverse and Peninsular mountain ranges from Ventura County to San Diego County. The spotted bat occurs in a range of habitats from arid desert and grasslands through mixed conifer forests (Zeiner et al. 1990b). This species forages near open water, and known roosting habitat for this species consists of rock crevices, which naturally limit their distribution. Threats to this species include loss of habitat due to development. This species is known to occur at the mouth of Castaic Creek, approximately two miles from the project site (CDFW 2016a). The project site provides ~~potentially~~ suitable foraging habitat and limited roosting habitat for this species. Therefore, spotted bat may occur on the project site for foraging and roosting.

Western Mastiff Bat

Western mastiff bat (*Eumops perotis*) is a California Species of Special Concern. The subspecies that occurs in Southern California is the California mastiff bat (*Eumops perotis californicus*). The western mastiff bat, the largest bat in the United States, is a very wide-ranging and high-flying insectivore that typically forages in open areas with high cliffs. This species roosts in small colonies in crevices on cliff faces. It occurs in the southeastern San Joaquin Valley and Coastal Ranges from Monterey County southward through Southern California and from the coast eastward to the Colorado Desert. The western mastiff bat is found in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, palm oases, chaparral, desert scrub, and urban areas (Zeiner et al. 1990b). Threats to this species include

loss of habitat due to development, drainage of marshes, and conversion of land to agriculture (Williams 1986). The project site provides ~~potentially~~-suitable foraging habitat, but no suitable roosting habitat for the western mastiff bat. Therefore, the western mastiff bat may occur on the project site for foraging, but is not expected to roost on the project site.

San Diego Black-Tailed Jackrabbit

San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) is a California Species of Special Concern. The San Diego subspecies of the widespread black-tailed jackrabbit is restricted to the Pacific slope from Santa Barbara County south to northwestern Baja California, Mexico. This nocturnal species prefers relatively open areas with sparse shrub cover. Threats to this species include loss of habitat to agriculture and development (Stephenson and Calcarone 1999). This species is known to occur approximately one mile west of San Francisquito Canyon (CDFW 2016a). The project site provides ~~potentially~~-suitable habitat for this species. Therefore, the San Diego black-tailed jackrabbit is expected to occur on the project site.

California Leaf-Nosed Bat

California leaf-nosed bat (*Macrotus californicus*) is a California Species of Special Concern. This species is known to occur from Riverside, Imperial, San Diego, and San Bernardino Counties south to the Mexican border. Former populations have disappeared from coastal basins in Los Angeles to San Diego Counties. Habitat for this species includes desert riparian, desert wash, desert scrub, desert succulent scrub, alkali desert scrub, and palm oases. This species prefers to roost in caves and mines, but may also roost in bridges or buildings. Threats to this species include loss of habitat and human disturbance in mines used as roosts (Williams 1986). The project site provides ~~potentially~~-suitable foraging habitat, but no suitable roosting habitat; however, this species is no longer found in Los Angeles County. Therefore, the California leaf-nosed bat is not expected to occur on the project site because it is outside the species' current known range.

Southern Grasshopper Mouse

Southern grasshopper mouse (*Onychomys torridus ramona*) is a California Species of Special Concern. It is a territorial, predatory rodent of grassland and sparse scrub vegetation types that prefers sandy soils and has been found to occur from Los Angeles County to northwestern Baja California, Mexico. Threats to this species include the loss of habitat due to development. This species is known to occur in Mint Canyon, approximately ten miles from the project site (CDFW 2016a). ~~Potentially~~-suitable habitat for this species is present on the project site. Therefore, southern grasshopper mouse may occur on the project site.

5.5 OAK TREES

The oak tree permit issued for the originally proposed project (Permit No. 92-074[5] dated May 5, 1999) authorized the removal of 34 coast live oaks in Phases B and C that meet the criteria for protection under the County of Los Angeles Oak Tree Ordinance No. 88-0157 (CLAOTO). The permit also authorized encroachment in the protected area of 60 additional coast live oaks. Phase A of the Tesoro del Valle project impacted three coast live oak trees that were authorized for removal by the above-referenced permit.

Due to revisions to the project's grading boundary in subsequent years, a supplemental oak tree survey report was prepared in 2010 (BonTerra 2010). This analysis identified 11 additional coast live oak trees that would be impacted by the revised grading boundary (5 of these trees were previously authorized for encroachment) and 1 additional tree that would be encroached upon.

These proposed impacts were later authorized by Oak Tree Permit No. 2010-00029, dated October 18, 2010.

An oak tree survey was performed in 2016 to identify individual oak trees that are protected by the CLAOTO in Phases B and C of the project. Additionally, the location and quantity of oak woodlands were identified as defined by the Oak Woodlands Management Plan (LACOWHCSA 2011). The 2016 survey identified a total of 158 oak trees that are regulated by the CLAOTO. An additional 12 oak trees were identified that meet the minimum requirement for inclusion under the Oak Woodlands Management Plan. Per the definition of the Oak Woodlands Management Plan, a total of 10.28 acres of oak woodlands occur on the project site.

According to the CLAOTO, a “heritage oak” is defined as any oak tree measuring 36 inches or more in diameter and/or a tree having significant historical or cultural importance to the community. A total of 18 oak trees on the project site are heritage oaks, as defined by the CLAOTO. For a detailed discussion of the survey results and individual tree descriptions, refer to Appendix J.

6.0 **PROJECT IMPACTS**

6.1 **INTRODUCTION**

The determination of impacts in this analysis is based on the existing biological resources in the project area, as previously described in Sections 4 and 5 and the proposed Tentative Tract Map grading limits. The project impact area includes a buffer that extends 200 feet from the edge of all housing lots to identify vegetation impacts that would occur through vegetation thinning for Los Angeles County Fire Code compliance. All construction activities, including staging, grading, equipment storage areas, and fuel modification areas are assumed to be contained within the impact areas. Indirect impacts to adjacent off-site areas are discussed in Section 6.5.

Direct, indirect, and cumulative impacts on biological resources have been evaluated. Direct impacts are those that involve the initial loss of habitats due to grading, construction, and construction-related activities. Indirect impacts are those that would be related to impacts on the adjacent remaining habitat due to construction activities (e.g., noise, dust) or operation of the project (e.g., human activity, indirect lighting). Cumulative impacts are two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Cumulative impacts can result from individually minor but collectively significant projects over a period of time (State CEQA Guidelines, Section 15355).

Impacts to biological resources associated with the proposed project are also evaluated with respect to common vegetation types, common plant species, common wildlife species, wildlife movement, and special status biological resources.

The actual and potential occurrence of these resources on the project site was correlated with the following significance criteria to determine whether the impacts to these resources as a result of the proposed project would be considered significant.

6.2 **SIGNIFICANCE CRITERIA**

The environmental impacts relative to biological resources are assessed using impact significance criteria that mirror the policy contained in CEQA, Section 21001(c) of the *California Public Resources Code*. Accordingly, the State Legislature has established it to be the policy of the State to:

Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities...

Determining whether a project may have a significant effect, or impact, plays a critical role in the CEQA process. According to Section 15064.7, Thresholds of Significance, of the State CEQA Guidelines, each public agency is encouraged to develop and adopt (by ordinance, resolution, rule, or regulation) thresholds of significance that the agency uses in the determination of the significance of environmental effects. A significant threshold is a quantitative, qualitative, or performance level of a particular environmental effect. The agency would normally determine an impact to be "significant" if it exceeds the threshold. In the development of significance thresholds for impacts to biological resources, CEQA provides guidance primarily in Section 15065, Mandatory Findings of Significance, and Appendix G, Environmental Checklist Form, of the State CEQA Guidelines. Appendix G of the CEQA Guidelines is more specific in addressing biological resources and encompasses a broader range of resources to be considered, including candidate, sensitive, or special status species; riparian habitat or other sensitive natural vegetation types;

federally protected wetlands; fish and wildlife movement corridors; local policies or ordinances protecting biological resources; and adopted habitat conservation plans. These factors are considered through the checklist of questions answered during the Initial Study process used to determine appropriate environmental documentation for a project (i.e., Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report [EIR]). Because these questions are derived from standards in other laws, regulations, and commonly used thresholds, it is reasonable to use these standards as a basis for defining significance thresholds in an EIR. For each of the thresholds identified below, the section of CEQA upon which the threshold was derived has been provided. For the purpose of this analysis, impacts to biological resources are considered significant (before considering offsetting mitigation measures) if one or more of the following conditions would result from implementation of the proposed project:

1. *If the project has a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife and Wildlife Service (CEQA Guidelines, Appendix G, IV[a]).¹*
2. *If the project has a substantial adverse effect on any sensitive natural communities (e.g., riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetlands) identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (CEQA Guidelines, Appendix G, IV[b]).*
3. *If the project has a substantial adverse effect on federally or state protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, and drainages) or waters of the United States as defined by Section 404 of the federal Clean Water Act or California Fish and Game Code Section 1600, et seq. through direct removal, filling, hydrological interruption, or other means (CEQA Guidelines, Appendix G, IV[c]).*
4. *If the project interferes substantially with the movement of any native or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedes the use of native wildlife nursery sites (CEQA Guidelines, Appendix G, IV[d]).*
5. *If the project converts oak woodlands (as defined by the state, oak woodlands are oak stands with greater than 10% canopy cover with oaks at least 5 inches in diameter measured at 4.5 feet above mean natural grade) or otherwise contain oak or other unique nature trees (junipers, Joshua trees, southern California black walnut, etc.). This threshold is superseded by the guidelines in the Oak Woodlands Conservation Management Plan (LACOWHCSA 2011).*
6. *If the project conflicts with any local policies or ordinances protecting biological resources, including Wildflower Reserve Areas (L.A. County Code, Title 12, Ch. 12.36), the Los Angeles County Oak Tree Ordinance (L.A. County Code, Title 22, Ch. 22.56, Part 16), the Significant Ecological Areas (SEAs) (L.A. County Code, Title 22, Section 22.56.215), and Sensitive Environmental Resources Areas (SERAs) (L.A. County Code, Title 22, Ch. 22.44, Part 6) (CEQA Guidelines, Appendix G, IV[e]).*

¹ Endangered and threatened species as used in this threshold are those listed by the USFWS and/or CDFW as Threatened or Endangered. Section 15380 of the State CEQA Guidelines indicates that a lead agency can consider a non-listed species (e.g., CNPS List 1B plants) to be Endangered, Rare, or Threatened for the purposes of CEQA if the species can be shown to meet the criteria in the definition of "Rare" or "Endangered". For the purposes of this discussion, the current scientific knowledge of the population size and distribution for each special status species was considered in determining whether a non-listed species met the definitions for Rare and Endangered according to Section 15380 of the State CEQA Guidelines.

7. If the project conflicts with the provisions of an adopted state, regional, or local habitat conservation plan (CEQA Guidelines, Appendix G, IV[f]).

An evaluation of whether an impact on biological resources would result in a “substantial adverse effect” must consider both the resource itself and how that resource fits into a regional context. For the proposed project, the regional setting includes the western portion of the Antelope Valley, including the slopes of the surrounding mountains that face the valley. Analysis of impacts is based on the project impact relative to the amount of the resource within the project region.

For the purposes of the impact analysis, “substantial adverse effect” is defined as the loss or harm of a magnitude which, based on current scientific data and knowledge, would (1) substantially diminish population numbers of a species or distribution of a habitat type within the region or (2) eliminate the functions and values of a biological resource in the region.

6.3 AVOIDANCE FEATURES

The proposed project has been developed by the applicant in a manner intended to minimize impacts to biological resources. The grading boundary has been reduced from approximately 718 acres (originally approved design) to less than 394 acres in the current design. No direct impacts to vegetation in the SEA are proposed, and all storm water runoff will be directed into existing storm drain channels so that indirect impacts to the SEA are similarly avoided.

The current project design minimizes impacts to USACE “waters of the U.S.” so that 12.5 percent of on-site waters are impacted and 12.7 percent of CDFW jurisdictional waters are impacted. No wetlands occur in the project impact footprint.

Impacts to special status vegetation types have also been minimized. No impacts to will occur to alluvial scrub or Fremont cottonwood woodland vegetation. The project will impact one percent of holly-leaf cherry woodland as the grading footprint largely avoids Wayside Canyon in the southwest corner of the site. Approximately one percent of habitat will be impacted that contains coast live oaks (e.g., coast live oak woodland, coast live oak woodland/blue elderberry scrub, coast live oak woodland–holly-leaf cherry woodland). Approximately 34 percent of sage scrub communities will be impacted by the project (consisting of chamise chaparral–sage scrub, sage scrub, and sage scrub–annual grassland). Approximately 31 percent of southern riparian scrub vegetation will be impacted by the project, which generally consists of willow trees and mule fat that have opportunistically established in various flood-control basins that were constructed in Phase B areas as part of Phase A construction. Impacts to oak trees have also been minimized. Of the 140 oaks trees subject to the CLAOTO, only 11 are located within the project impact footprint (8 percent). Similarly, of the 10.28 acres of oak woodlands that occur on the site, as defined by the Oak Woodlands Conservation Management Plan (LACOWHCSA 2011), only 0.31 acre (3 percent) would be impacted by the project.

Finally, to minimize the introduction and spread of invasive plants on the site, the use of invasive plant species will be avoided in the development of landscape plans.

A comparison of impacts and a discussion of the consistency between the currently proposed project impacts and the EIR that was approved in 1999 is provided in Section 6.6.

6.4 DIRECT IMPACTS

The direct impacts for the proposed development include the impacts from the construction of the graded pads and roadways, staging areas, future fuel modification areas, and buffer zones. All fuel modification is considered a direct impact to biological resources.

6.4.1 Vegetation Type Impacts

Vegetation types and other areas that will be impacted are listed in Table 6 and illustrated on Exhibit 10. These totals include all grading impacts, including fuel modification zones. A total of 880.80 acres would be preserved on the project site as open space (44.35 acres subject to fuel modification and 836.45 acres as undisturbed open space).

**TABLE 6
VEGETATION TYPES AND OTHER AREAS IMPACTED
BY THE PROPOSED PROJECT**

Vegetation Type/Other Area	On-Site Grading Footprint (acres)	Fuel Modification Zone (acres)	No Impact (acres)	Total On Site (acres)
Native Vegetation Types				
alluvial scrub (<i>Lepidospartum squamatum</i> Alliance)	0.00	0.00	27.51	27.51
blue elderberry scrub (<i>Sambucus nigra</i> Alliance)	8.69	0.00	4.42	13.11
chamise chaparral (<i>Adenostoma fasciculatum</i> Alliance)	73.74	9.15	191.34	274.23
chamise chaparral–annual grassland (<i>Adenostoma fasciculatum</i> Alliance)	12.52	2.83	19.45	34.80
chamise chaparral–sage scrub (<i>Adenostoma fasciculatum</i> – <i>Salvia mellifera</i> Alliance)	173.10	14.78836345	176.66	364.54
coast live oak woodland (<i>Quercus agrifolia</i> Alliance)	0.23	0.31	4.80	5.34
coast live oak woodland–blue elderberry scrub (<i>Quercus agrifolia</i> – <i>Sambucus nigra</i> Alliances)	0.00	0.00	7.80	7.80
coast live oak woodland–holly-leaf cherry woodland (<i>Quercus agrifolia</i> – <i>Prunus ilicifolia</i> Alliances)	0.00	0.00	0.47	0.47
Fremont cottonwood woodland (<i>Populus fremontii</i> Alliance)	0.00	0.00	1.58	1.58
holly-leaf cherry woodland (<i>Prunus ilicifolia</i> Alliance)	0.12	0.00	8.07	8.19
mixed chaparral–alluvial scrub–annual grassland (no Alliance)	3.56	0.00	7.83	11.39
sage scrub (<i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Alliance)	74.00	6.67	188.98	269.65
sage scrub–annual grassland (<i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Alliance)	20.80	4.96	132.37	158.13
southern riparian scrub (<i>Salix lasiolepis</i> Alliance)	1.43	0.00	3.20	4.63
Subtotal Native Vegetation Types	368.19	38.70	774.48	1,181.37
Non-Native Vegetation Types				
annual grassland (<i>Bromus</i> semi-natural stands)	8.68	2.17	43.91	54.76
ornamental	3.83	1.74	2.81	8.38
Subtotal Non-Native Vegetation Types	12.51	3.91	46.72	63.14
Other Areas				
disturbed–developed	12.78	1.74	12.55	27.07
open water	0.12	0.00	2.70	2.82
Subtotal Other Areas	12.90	1.74	15.25	29.89
Total	393.60	44.35	836.45	1,274.40

Alluvial Scrub and Mixed Chaparral–Alluvial Scrub/Annual Grassland

Mixed chaparral–alluvial scrub/annual grassland is located in the eastern portion of the project site. The acreage of the combined impact is 3.56 acres. Alluvial scrub is a component of this vegetation type and impacts to alluvial scrub would be considered significant (1) due to the low remaining acreage of this vegetation type in Southern California and in the project region and (2) its CDFW listing as special status. Implementation of Mitigation Measure (MM) 1 would reduce this impact to a level considered less than significant under CEQA.

Alluvial scrub is present in the San Francisquito Canyon area and would not be impacted by project implementation; therefore, no mitigation is required.

Blue Elderberry Scrub

Blue elderberry scrub would be impacted by project implementation. Impacts on blue elderberry scrub would be considered adverse, but less than significant because this vegetation type is considered relatively common in the project region. Therefore, impacts to this vegetation type are considered less than significant and no mitigation would be necessary under CEQA.

Chamise Chaparral and Chamise Chaparral/Annual Grassland

Chamise chaparral and chamise chaparral/annual grassland would be impacted by construction of the proposed project. Additional impacts to these vegetation types would occur by thinning of vegetation (i.e., reduction of shrub density) to comply with Los Angeles County fuel modification guidelines. Impacts to chamise chaparral and chamise chaparral/annual grassland would be considered adverse but less than significant because this vegetation type is considered relatively common in the project region. Chaparral is one of the most abundant vegetation types in Santa Clarita. Therefore, impacts to these vegetation types are considered less than significant and no mitigation would be necessary under CEQA.

Coast Live Oak Woodland

Coast live oak woodland would be impacted by construction of the proposed project. Additionally, this vegetation type is located in areas subject to fuel modification, though any vegetation thinning should avoid tree removal. Impacts on this vegetation type would be considered significant per the CLAOTO and due to the limited distribution of this vegetation type in California and in the project region. Implementation of MM 2 would reduce this impact to less than significant under CEQA.

Coast Live Oak Woodland/Blue Elderberry Scrub and Coast Live Oak Woodland–Holly-Leaf Cherry Woodland

Coast live oak woodland–holly-leaf cherry woodland and coast live oak woodland/blue elderberry scrub would not be impacted by project implementation and do not occur in fuel modification areas; therefore, no mitigation is required.

Fremont Cottonwood Woodland

Fremont cottonwood woodland would not be impacted by construction of the proposed project; therefore, no mitigation is necessary under CEQA.

Holly-Leaf Cherry Woodland

Holly-leaf cherry woodland would be impacted by construction of the proposed project. Impacts on holly-leaf cherry woodland would be considered significant (1) due to the low remaining acreage of this vegetation type in Southern California and in the project region and (2) its CDFW listing as special status. Implementation of MM 1 would reduce this impact to less than significant under CEQA.

Chamise Chaparral–Sage Scrub, Sage Scrub, and Sage Scrub/Annual Grassland

Sage scrub would be impacted by project implementation, which includes chamise chaparral–sage scrub, sage scrub, and sage scrub/annual grassland vegetation types. Additional impacts to these vegetation types would occur by thinning of vegetation to comply with Los Angeles County fuel modification guidelines. Impacts on these vegetation types would be considered significant (1) according to County standards; (2) due to the low remaining acreage of this vegetation type in Southern California and in the project region; (3) its CDFW listing as special status; and (4) its potential to support special status species. Implementation of MM 1 would reduce this impact to less than significant under CEQA.

Southern Riparian Scrub

Southern riparian scrub would be impacted by the construction of the proposed project. Impacts on southern riparian scrub would be considered significant (1) due to the low remaining acreage of this vegetation type in Southern California and in the project region and (2) its CDFW listing as special status. Implementation of MM 1 would reduce this impact to less than significant under CEQA.

Annual Grassland

Annual grassland would be impacted by construction of the proposed project and through thinning for fuel modification compliance. Impacts on this vegetation type would not be considered significant because (1) these areas are dominated by non-native annual grasses and forbs (mostly of European origin) that are indicators of significant previous site disturbance and (2) this association is common throughout Southern California and the region. Therefore, impacts to this vegetation type are considered less than significant and no mitigation would be necessary under CEQA.

Ornamental

Ornamental (i.e., woodland landscaped) areas would be impacted by project implementation. Impacts on these areas would be considered less than significant because these areas are considered to have a low biological value; therefore, no mitigation would be necessary.

Disturbed–Developed

Disturbed and developed areas would be impacted by project implementation. Impacts on these areas would be considered less than significant because these areas are considered to have a low biological value; therefore, no mitigation would be necessary.

Open Water

One area of open water would be impacted by project implementation. As this area occurs on an ephemeral basis and is located in a constructed flood-control basin, impacts would be considered less than significant and no mitigation would be necessary.

6.4.2 Wildlife Impacts

To assess impacts on wildlife, the total impact on vegetation types that provide habitat for that wildlife species was evaluated. A summary of impacts on vegetation types (i.e., wildlife habitat) that would be impacted as a result of project construction is shown in Table 6. Total vegetation impacts from project implementation (grading and fuel modification) would be 437.95 acres (34.4 percent of the site). This is a substantial reduction in impacts compared to the approved 1999 design, which would have removed 718.30 acres (56.5 percent). The distribution of vegetation types and their relation to the project impact boundary is shown in Exhibit 10. The following discussion of wildlife impacts focuses on the common species occurring on the project site. Impacts on special status wildlife species are discussed separately in Section 6.4.3 of this report.

General Habitat and Wildlife Loss

The proposed project would result in the loss of approximately 368 acres of native habitat, which provides valuable nesting, foraging, roosting, and denning opportunities for a wide variety of wildlife species. In addition, implementation of the proposed project would result in the loss of approximately 12 acres of non-native habitats that provide lower quality wildlife habitat. However, these non-native habitats do provide limited nesting, foraging, roosting, and denning opportunities for some species. Removing or altering habitats on the project site would result in the loss of small mammals, reptiles, amphibians, and other animals of slow mobility that live in the proposed project's direct impact area. More mobile wildlife species now using the project site would be forced to move into remaining areas of open space, consequently increasing competition for available resources in those areas. This situation may result in the loss of individuals that cannot successfully compete. Although the proposed project would impact a large quantity of high quality habitat, it would also preserve high quality habitat as permanent open space. Project implementation would not significantly reduce wildlife populations in the region, nor would it reduce any specific wildlife population in the region to below self-sustaining numbers. Therefore, project impacts on wildlife would be considered adverse but less than significant and no mitigation is required. However, direct impacts on wildlife and wildlife habitat would be reduced by implementation of MM 1 and MM 2.

Wildlife Movement and Habitat Fragmentation

The ability of Wayside Canyon and other smaller canyons and ridges on and adjacent to the site to support regional wildlife movement has been compromised by development in Wayside Canyon and the surrounding area. As a result, these features are expected to support local wildlife movement almost exclusively with very little potential for regional wildlife movement. The proposed project would develop the north-south trending ridgeline and the upper reach of Wayside Canyon, which is expected to further limit local wildlife movement that still occurs in this drainage. Furthermore, increased light and noise pollution and the concomitant increase in human activity after the proposed development is completed would likely further degrade the quality of this drainage and other local travel routes used by wildlife in the project vicinity. Direct and indirect impacts, such as increased light and human activity, on Wayside Canyon and other smaller canyons and ridges on and adjacent to the site are considered adverse but less than significant since the loss of local movement areas would not have a substantial effect on regional wildlife populations. In addition, greater opportunities for regional movement would still be available in

the general region north of the project site in the vicinity of Castaic Lake and the Angeles National Forest. Therefore, these impacts would be considered adverse but less than significant. However, implementation of MMs 1, 2, 9, and 10 would further reduce any impacts.

6.4.3 **Special Status Biological Resource Impacts**

Special Status Plants

Of the special status plant species known to occur in the project region, four were observed on the project site during focused plant surveys: slender mariposa lily (CRPR 1B.2), club-haired mariposa lily (CRPR 4.3), Peirson's morning-glory (CRPR 4.2), and Palmer's grapplehook (CRPR 4.2). As discussed above, lily plants present on the project site are probable hybrids of club-haired mariposa lily and slender mariposa lily. During focused botanical surveys in 2016, a total of 93 occurrences (groups) of mariposa lilies were documented; several occurrences contained a single lily plant, while 150 lily plants was the largest number observed in a single location. Of the 93 total occurrences (groups) of slender mariposa lily observed in 2016, approximately 38 occurrences (about 41 percent) are within the currently proposed impact boundary (Exhibit 11) (Psomas 2016c). Focused surveys conducted in 2011 and 2005 identified lily populations in the same general locations, with quantities varying over time (approximately 1,165 plants were observed in 2016 compared with 2,647 in 2011 and 496 in 2005). Implementation of MM 3 would reduce impacts to club-haired and slender mariposa lily to less than significant.

Several small populations of Peirson's morning glory were observed scattered throughout the project site. One large population of Palmer's grapplehook was observed. These species occur outside the project impact boundary and will not be affected by the project. Therefore, impacts to these species are considered less than significant and no mitigation would be required.

The 2011 and 2016 botanical reports for the project noted the presence of Great Basin sagebrush in San Francisquito Canyon. This may actually be Parish's sagebrush (a subspecies of Great Basin sagebrush) which is regionally uncommon, though it is not listed as a special status species by the CNPS or State and federal resource agencies. Regardless, this species is located outside the project impact footprint and no impacts are proposed.

Wildlife

The proposed project would result in the loss of ~~potential-suitable~~ habitat for ten special status wildlife species known to be present or expected to occur on the project site. An additional 13 special status wildlife species may occur on site due to the presence of ~~potentially~~-suitable habitat (including foraging habitat). The following discussion evaluates impacts on those wildlife species observed and those that may occur on the project site. For those species with potential to occur, potential impacts were evaluated for the habitat that the species is expected to occupy.

Fish

The Santa Ana sucker, unarmored threespine stickleback, and arroyo chub are known to occur in the upper reaches of San Francisquito Canyon several miles upstream of the project site and were observed within the Tesoro del Valle property boundaries during focused surveys in 2005. The current project design does not impact San Francisquito Canyon or its immediately adjacent areas (Exhibit 11). Storm water will drain in a southerly direction and will tie into existing storm water facilities. Therefore, no direct impacts on these species are expected from project construction. Construction activities are not expected to result in any increased levels of sedimentation, erosion, or release of pollutants to San Francisquito Canyon. Because no direct

or indirect impacts to San Francisquito Canyon are expected from project construction, no mitigation related to fish habitat in this area is required.

Amphibians

Western spadefoot tadpoles were observed in several pools in an unnamed drainage in the southwestern portion of the project site (Exhibit 11). Impacts on this species would be considered significant according to Section 15380 of the State CEQA Guidelines.

Based on correspondence and conversations with Scott Harris and Tim Hovey of the CDFW (personal communication 2017), the CDFW's preferred method of mitigating impacts to this species consists of (1) constructing replacement ponds for western spadefoot outside of the project development footprint and (2) translocating western spadefoot eggs and tadpoles from This mitigation strategy of collecting western spadefoot eggs and tadpoles and relocating them their breeding habitat in the project area to the replacement ponds. Translocating the eggs and tadpoles allows the juvenile toads to become accustomed to the new environment once they leave the pond area to create burrows in adjacent upland habitat. Mr. Hovey and Mr. Harris of described other projects in the Santa Clarita area where this approach has been utilized including the Sterling Gateway project (north of Highway 126) and the Vista Canyon project on Sand Canyon Boulevard. MM 4 provides more detail on the requirements of such a mitigation program and implementation of MM 4 would reduce project impacts to western spadefoot breeding habitat to less than significant under CEQA.

The arroyo toad and California red-legged frog are not expected to occur on the project site due to lack of suitable habitat. Therefore, there would be no impact on these species and no mitigation would be required under CEQA.

Reptiles

Special status reptile species were observed or potentially occur on the project site: the silvery legless lizard, coastal whiptail, coast horned lizard, coast patch-nosed snake, and two-striped garter snake. Impacts to ~~potentially~~ suitable habitat for these species is summarized below:

- **Silvery Legless Lizard:** 3.91 acres (8.7 percent of existing alluvial scrub, coast live oak woodland, coast live oak–holly-leaf cherry woodland, holly-leaf cherry woodland, and mixed chaparral–alluvial scrub–annual grassland).
- **Coastal Whiptail:** 375.21 acres (30.7 percent of existing alluvial scrub, blue elderberry scrub, chamise chaparral, chamise chaparral–annual grassland, chamise chaparral–sage scrub, coast live oak woodland–blue elderberry scrub, coast live oak–holly-leaf cherry woodland, holly-leaf cherry woodland, mixed chaparral–alluvial scrub–annual grassland, sage scrub, sage scrub–annual grassland, and annual grassland).
- **Coast Horned Lizard:** 3.91 acres (8.7 percent of existing alluvial scrub, coast live oak woodland, coast live oak–holly-leaf cherry woodland, holly-leaf cherry woodland, and mixed chaparral–alluvial scrub–annual grassland).
- **Coast Patch-Nosed Snake:** 375.21 acres (30.7 percent of existing alluvial scrub, blue elderberry scrub, chamise chaparral, chamise chaparral–annual grassland, chamise chaparral–sage scrub, coast live oak woodland–blue elderberry scrub, coast live oak–holly-leaf cherry woodland, holly-leaf cherry woodland, mixed chaparral–alluvial scrub–annual grassland, sage scrub, sage scrub–annual grassland, and annual grassland).
- **Two-Striped Garter Snake:** 0.00 acres (0.0 percent of existing alluvial scrub, Fremont cottonwood woodland, and riparian scrub).

Although the proposed project would impact potential-suitable habitat for these species, none of these species are listed as Threatened or Endangered by State or federal resource agencies. The loss of native habitat would be considered an adverse impact on these species, but would not be expected to substantially reduce regional populations of any of these species. Therefore, project impacts on these special status reptile species would be considered adverse but less than significant and no mitigation is required.

The western pond turtle is not expected to occur on the project site due to lack of suitable habitat. Therefore, there would be no impact on this species and no mitigation would be required.

Birds

Six federally and/or State-listed Threatened or Endangered or Candidate bird species occur in the project region: tricolored blackbird, Swainson's hawk, western yellow-billed cuckoo, southwestern willow flycatcher, coastal California gnatcatcher, and least Bell's vireo. The Swainson's hawk may occur as a rare migrant, but is not expected to nest on the project site. Project implementation would result in an incremental loss of non-critical foraging habitat for the Swainson's hawk, which is considered adverse but less than significant per CEQA; therefore, mitigation is not required. The coastal California gnatcatcher was not observed during the 2005 or 2008 focused surveys and only a solitary dispersing juvenile was observed during 2015 focused surveys. Given the lack of nesting activity on the site, no impact to this species is expected and no mitigation would be required. The project impact footprint is clustered in the southern portion of the site with 880.8 acres of preserved native vegetation to the north and east of the impact footprint. These open space areas help to maintain dispersal areas for the gnatcatcher north of the project site and preserving north-south movement up San Francisco Canyon.

The western yellow-billed cuckoo, southwestern willow flycatcher, and least Bell's vireo are not expected to occur because there is not riparian habitat extensive enough to support these species on the project site. Therefore, project implementation would not result in any impacts on these three species and no mitigation would be necessary under CEQA.

Additional passerine bird species that are California Species of Special Concern but are not listed as Threatened or Endangered by State or federal resources agencies were observed or potentially occur on the project site: grasshopper sparrow, yellow warbler, and yellow-breasted chat. If present, the proposed project would impact potential-suitable habitat for these species. The loss of native habitat would be considered an adverse impact, but would not be expected to substantially reduce regional populations of any of these species. Therefore, project impacts on these special status bird species would be considered adverse but less than significant and no mitigation is required.

Loggerhead shrike is noted to be in decline throughout its range, particularly in the Los Angeles County coastal slope where it is now virtually extirpated as a breeder (Allen et al 2016). The shrike has been observed during coastal California gnatcatcher surveys in 2005, 2008, and 2015, though nesting activity was identified only during the 2008 surveys. Since nesting activity has been only detected in the northern portion of the property outside the project impact footprint, the project is not expected to have a significant impact on loggerhead shrike breeding in the region. Preservation of the northern half of the property as permanent open space will help to offset the loss of any habitat that has the potential to support breeding of the species.

The proposed project would result in the loss of suitable foraging habitat for a variety of raptor species that are California Species of Special Concern, including the golden eagle, long-eared owl, northern harrier, and white-tailed kite. Of these species, the golden eagle and white-tailed

kite are also considered Fully Protected Species. Although the loss of preferred foraging habitat (annual grassland and sage scrub/ annual grassland) as well as other suitable foraging habitat (sage scrub) would contribute to the ongoing loss of foraging habitat for these species, the impact would be considered less than significant due to the regional abundance of available foraging habitat. Therefore, project impacts on foraging habitat for these special status raptor species would be considered adverse but less than significant and no mitigation is required.

The golden eagle, long-eared owl, northern harrier, white-tailed kite, and common raptor species (such as red-tailed hawk) have the potential to nest on the project site. Should an active raptor nest (common or special status species) be found on the project site, the loss of an active nest would be considered a violation of the *California Fish and Game Code* (Sections 3503, 3503.5, and 3513). The loss of any active raptor nest occurring on the project site would be considered significant. Impacts on these species would be reduced to less than significant under CEQA with the implementation MM 5.

The burrowing owl is not expected to occur on the project site as a habitat assessment in 2007 did not detect any burrows on the site and vegetation has steadily become more dense as the site continues to recover from the 2002 Copper Fire. Therefore, suitable habitat for this species is not currently present on the project site and the burrowing owl is not expected to inhabit the site at this time. Future disturbance on the site may create suitable conditions for the presence of this species. Implementation of MM 6 will confirm that the project will have no impact on this species or, if detected, MM 6 will reduce impacts to a less than significant level.

Several additional species have been recognized by the Los Angeles Audubon Society as “at-risk” in the region (Allen et al 2016). In addition to species listed in Table 5, the Audubon “at-risk” species that have the potential to occur on the site include greater roadrunner (*Geococcyx californianus*), turkey vulture (*Cathartes aura*), ferruginous hawk (*Buteo regalis*), prairie falcon (*Falco mexicanus*), black swift (*Cypseloides niger*), olive-sided flycatcher (*Contopus cooperi*), gray vireo (*Vireo vicinior*), purple martin (*Progne subis*), cactus wren (*Campylorhynchus brunneicapillus*), and summer tanager (*Piranga rubra*). Although not recognized by State or Federal agencies, the Los Angeles Audubon Society considers these species sensitive. Per CEQA, these and all other common species (i.e., those species that are not considered special status by State and federal agencies) are evaluated within the assessment of common species for impact by project-related activities.

Mammals

Special status mammal species potentially present on the project site include the pallid bat, Townsend’s big-eared bat, spotted bat, western mastiff bat, San Diego black-tailed jackrabbit, California leaf-nosed bat, and southern grasshopper mouse. Of these species, only the Townsend’s big-eared bat is State Candidate for listing. It has potential to occur for foraging. None of these species are listed as Threatened or Endangered. If present, the proposed project would impact potential-suitable habitat for these species. The loss of native habitat would be considered an adverse impact but would not be expected to substantially reduce regional populations of any of these species. Therefore, project impacts on these special status mammal species would be considered adverse, but less than significant and no mitigation is required.

The pallid bat and spotted bat may also have limited potential to roost in or adjacent to the impact area. Project implementation would result in the loss of some marginal roosting habitat for these species. Therefore, impacts on bat roosts would be considered adverse, but less than significant and no mitigation would be required.

6.4.4 Oak Tree Impacts

The impact area contains 11 coast live oak trees that meet the CLAOTO criteria for protection (Exhibit 12). None of these oak trees are considered to be heritage trees as defined by the CLAOTO. One additional coast live oak tree that meets the CLAOTO heritage oak criteria is located close to the impact area and is expected to have its protected area encroached upon (the protected zone is defined by the CLAOTO as five feet outside the tree's outer canopy). All other oak trees on the property are considered to be unimpacted because no soil disturbance is proposed within the root protection zone (i.e., areas within five feet of the outer canopy) of any oak tree.

The project site contains 10.28 acres of oak woodlands as defined by the County of Los Angeles Oak Woodlands Management Plan. Project construction would result in impacts to 0.31 acre (3 percent) of these woodland resources. For descriptions of the oak trees to be removed, refer to the 2016 Oak Tree Survey Report provided in Appendix J-1.

As part of the original approval of the project by the County of Los Angeles in 1999, Oak Tree Removal Permit No. 92-074[5] was issued based on the findings on an oak tree report prepared by Sapphos Environmental (1994). This oak tree permit authorized the removal of 34 oak trees and encroachment within the protected zone of 60 additional oak trees. Phase A of the Tesoro del Valle project impacted three coast live oak trees that were authorized for removal by the above-referenced permit. The number of trees that were encroached upon by Phase A construction activities is unknown.

Due to revisions to the project's grading boundary in subsequent years, a supplemental oak tree survey report was prepared in 2010 (BonTerra Consulting 2010). This analysis identified 11 additional coast live oak trees that would be impacted by the revised grading boundary (5 of these trees were previously authorized for encroachment) and 1 additional tree that would be encroached upon (~~Exhibit 12~~). These proposed impacts were subsequently authorized by Oak Tree Removal Permit No. 2010-00029, dated October 18, 2010. The loss of 11 coast live oak trees within the impact limits and the potential loss of 1 additional coast live oak that is adjacent to the impact limits would be considered a significant impact and would require mitigation. MM 2 would reduce this impact to a less than significant level.

6.4.5 Jurisdictional Water Impacts

U.S. Army Corps of Engineers Determination

An area must exhibit all three wetland parameters as provided in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008) and the 1987 *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) to be considered a jurisdictional wetland. For ease of reference, the project site was divided into 28 different drainage features. Hydric soils, wetland hydrology, and wetland vegetation were observed in a small stretch of drainage area within Drainage 14 outside the impact limits in the eastern portion of the site. The remaining drainage features on the site majority do not meet these criteria. Therefore, the limits of non-wetland USACE jurisdiction were defined by the OHWM as described in Section 3.7.

The USACE issued an Individual Permit for compliance with Section 404 of the Clean Water Act (Permit No. 1999-15629-AOA) in 1999, which authorized impacts to 3.84 acres of "waters of the U.S." (3.73 acres of non-wetland waters and 0.11 acre of wetlands). This Section 404 permit was subsequently extended in 2004, 2009, and 2014. Construction of the Phase A portion of the project impacted 1.43 acres of "waters of the U.S.", so that 2.41 acres of authorized impacts

remained for the other phases of the project. Psomas prepared an updated Jurisdictional Delineation Report in 2016 in support of a new Section 404 permit that identified 4.82 acres of “waters of the U.S.” in the Phases B and C portion of the site. Though the documented quantity of “waters of the U.S.” is greater than the amount authorized in the USACE permit, the actual impacts are less, reflected by the overall reduction in the Phases B and C project area. A summary of impacts to USACE “waters of the U.S.” is provided in Table 7.

TABLE 7
IMPACTS TO U.S. ARMY CORPS OF ENGINEERS/REGIONAL
WATER QUALITY CONTROL BOARD JURISDICTIONAL WATERS

USACE/RWQCB Jurisdiction	Permanent Impact (acres)	Total Existing (acres)	Percent Impacted
Wetland	0.00	0.02	0.0%
Non-Wetland “waters of the U.S.”	4.82	38.00	12.7%
Total	4.82	38.02	12.7%
USACE: U.S. Army Corps of Engineers; RWQCB: Regional Water Quality Control Board Source: Psomas 2016a			

California Regional Water Quality Control Board Determination

The RWQCB jurisdictional boundaries are the same as those determined for the USACE “waters of the U.S.” for drainages on the project site. Unlike the USACE, the RWQCB also asserts jurisdiction over “isolated waters” (i.e., waters that do not have a connection to a Traditional Navigable Water). Because no isolated waters occur on the site, the quantity of jurisdictional waters for the RWQCB and the USACE are the same.

The RWQCB Water Quality Certification (WQC) No. 99-053 was issued on August 5, 1999, and is tied to the USACE permit. The term of the WQC was for a total of five years and expired on August 5, 2004. A new WQC should be obtained prior to any impacts to jurisdictional “waters of the U.S.”. Therefore, MM 7 recommends that a new RWQCB WQC be obtained prior to impacts to jurisdictional waters.

California Department of Fish and Wildlife Determination

The limits of CDFW jurisdictional waters on the project site are generally defined by the top of the bank of the channel. For streambeds that support riparian vegetation, the CDFW’s jurisdictional limits extend to the outer drip line of such vegetation. The 2016 Jurisdictional Delineation Report identified a total of 9.31 acres of CDFW jurisdictional waters that would be impacted by the proposed project (Table 8). Generally, these streambeds support only upland vegetation so that CDFW jurisdictional limits extended to the top of the channel banks.

Streambed Alteration Agreement (SAA) No. 5-126-99 was issued on November 17, 1999, and authorized the permittee to impact 3.84 acres of streambeds. The agreement also authorized impacts to 12 acres of Riversidian alluvial fan scrub. Beginning in 2004, annual extensions to the SAA were granted by the CDFW for five years. Because the SAA was associated with an approved tract map, the SAA was automatically extended by various California Senate and Assembly Bills until July 2015. The CDFW provided a final extension to the SAA until September 2020. If project impacts have not been completed by the current expiration date, a new SAA will be issued prior to impacts to jurisdictional waters, as required by MM 7.

TABLE 8
IMPACTS TO CALIFORNIA DEPARTMENT OF FISH
AND WILDLIFE JURISDICTIONAL WATERS

CDFW Jurisdiction	Permanent Impact (acres)	Total Existing (acres)	Percent Impacted
Streambed Bed/Bank and Riparian Vegetation	9.31	72.81	12.8%
Total	9.31	72.81	12.8%
CDFW: California Department of Fish and Wildlife.			
Source: Psomas 2016a			

Based on field observations and collected data, implementation of the project would result in direct impacts to 4.82 acres of non-wetland “waters of the U.S.” under the jurisdiction of the USACE; 4.82 acres of “waters of the State” under the jurisdiction of the RWQCB; and 9.31 acres of jurisdictional streambeds and riparian habitat under the jurisdiction of the CDFW (Exhibit 13). These impacts would be considered significant, but implementation of MM 7 would reduce the impact to a less than significant level under CEQA.

6.5 INDIRECT IMPACTS

Indirect impacts are those related to disturbance by construction (such as noise, dust, and urban pollutants), long-term use of the project site, and the project’s operational effect on adjacent habitat areas. The indirect impact discussion below includes a general assessment of the potential indirect effects (noise, increased dust and urban pollutants, night lighting, and human activity) of the construction and operation of the proposed project.

6.5.1 Oak Trees

Potential indirect impacts to oak trees from project development would include changes in ground surface elevation, site hydrology, or increased human activity that would affect the health of the trees. One tree is subject to a change in surface grade within its root zone; this is the encroachment tree described above that will be monitored to determine if its health is damaged and should be mitigated. Other trees are generally grouped in the southwestern corner, central-eastern, and central-western portions of the project site. Approximately 80 percent of the areas that drain toward the oak trees in the southwestern corner and central-eastern portions of the site will be graded, potentially affecting 62 trees in these watersheds. In the central-western portion of the site, project development will affect approximately 8 percent of the watershed that supports 45 oak trees. An additional 50 oaks occur on the site that will not have their watersheds affected.

These trees are also located in remote portions of the project site that do not receive human visitation. The exception to this are the trees in the eastern-central portion of the site that occur along an ephemeral streambed that drains to the east, which also has a mountain biking trail. Human activity will likely continue along this trail, though this area will likely not experience an increase in trail use as there is no convenient connection to the homes that will be constructed.

It is not possible to predict the impact that modifying the watersheds of the trees described above will have on their health. The two trees in the southwestern corner of the site occur on generally flat ground and likely survive on direct precipitation rather than water that flows from nearby ephemeral drainages. The 58 trees in the central-eastern portion of the site occur in a wide canyon area; these trees appear to rely on groundwater rising to the surface (a wetland occurs in this

canyon that is the result of groundwater) rather than on water flowing from upstream ephemeral drainages that will be affected by the project. The trees in the central-western portion of the site will only have a small modification to their watershed (an eight percent loss as described above); therefore, this is not expected to significantly affect these trees. Though the project is not expected to affect these trees, long-term monitoring of their health as described in MM 2 will identify any deterioration in their health and require appropriate replacement planting.

6.5.2 Construction-Related Noise Impacts

Noise levels on the project site would increase over present levels during construction of the proposed project. Temporary construction noise impacts associated with the approved project were analyzed previously in the 1999 EIR. During construction, temporary noise impacts have the potential to disrupt foraging, nesting, roosting, and denning activities for a variety of wildlife species. Because most species in the project vicinity are not listed as Threatened or Endangered by State or federal resource agencies, these impacts are considered adverse but less than significant. However, the construction noise BMP listed in Section 7.5.1 is recommended to ensure the project is consistent with regulations that protect biological resources.

6.5.3 Increased Dust and Urban Pollutants

Ground disturbance activities would disturb soils and result in the accumulation of dust on the surface of the leaves of trees, shrubs, and herbs; excessive dust accumulation can impair plant respiratory function. This indirect effect from proposed construction on native vegetation would be considered adverse, but less than significant, since it would not reduce the project site's plant populations to below self-sustaining levels. In addition, the project reduces grading as compared to the approved project design. Therefore, no mitigation would be required.

Additional impacts on biological resources in the area could occur as a result of changes in water quality and water velocity. Urban runoff from the proposed development site containing petroleum residues and the improper disposal of petroleum and chemical products from construction equipment (temporary) or residential areas (permanent, i.e., cars, improper disposal of chemicals) could have the potential to adversely affect water quality and, in turn, affect populations of wildlife species (including special status species) by (1) reducing the amount of available habitat; (2) smothering eggs of aquatic species (fish and amphibians); and (3) impacting other wildlife species that use riparian areas (amphibians, reptiles, birds, and mammals). Water quality could also be adversely affected by the runoff of nutrients from urban development. While these indirect impacts are considered potentially significant, the reduction in grading and disturbed area as compared to the approved project design would reduce impacts and implementation of MM 8 would further reduce impacts to a less than significant level.

6.5.4 Night Lighting

Lighting of the homes and yards in the proposed residential development could result in an indirect impact on the behavioral patterns of nocturnal and crepuscular (i.e., active at dawn and dusk) wildlife adjacent to the lighted areas. Of greatest concern is the effect on small, ground-dwelling animals that use the darkness to hide from predators and on owls, which are specialized night foragers. The project would introduce lighting over less of the site as compared to the approved project, thereby reducing impacts. However, to further reduce this impact, implementation of MM 9 is recommended.

6.5.5 Increased Human and Domestic Animal Presence

Though the project site is adjacent to residential areas and moderate recreational activity (e.g., hiking, mountain biking) occurs there, the added human population would potentially cause increased human disturbances to (and the ongoing degradation of) conserved areas that will be adjacent to developed areas. Increased recreational and other human activities along trails and in open space areas could result in increased noise disturbances to wildlife (especially if within the breeding season of birds), which can result in nest abandonment; result in the harassment and/or capture of slower moving species, such as some reptiles and amphibians; the displacement of other wildlife species; increased amount of refuse and pollutants in the area; soil compaction; and trampling of ground-dwelling flora and fauna.

Increased use of open space and natural areas by residents of the proposed project would also result in a corresponding increase in use of these areas by domestic animals. Dogs can disturb nesting or roosting sites and disrupt the normal foraging activities of wildlife in adjacent habitat areas. Should this activity occur frequently, and over a long time period, these disturbances may have a long-term effect on the behavior of both common and special status animals and can result in their extirpation from the area. Feral cats and house cats can cause substantial damage to the species composition of natural areas through predation, including populations of special status species. Impacts caused by increased human and domestic animal presence are considered a significant impact. The project would introduce 108 additional dwelling units beyond those analyzed previously in the 1999 EIR, but those units would be developed within a smaller footprint. In addition, implementation of MM 10 will reduce this impact to a level of less than significant.

6.5.6 Landscaping Irrigation and Storm Water Runoff

The proposed project would alter drainage patterns on the site. Potential impacts that may result from project implementation include changes in storm water volume, nonpoint source pollution, and sediment deposition that may affect San Francisquito Creek. The following discussion addresses these potential impacts on biological resources. Changes in storm water runoff are analyzed in the hydrological technical report prepared by Sikand Engineering (2016). Areas on the project site to be developed that currently drain to San Francisquito Creek will discharge into an existing storm drain system that is maintained by Los Angeles County that discharges into San Francisquito Creek, approximately 0.3 mile north of Copper Hill Drive. Under existing conditions, burned and bulked flows from the undeveloped drainage areas total approximately 190 cubic feet per second (cfs), and the calculated total debris volume during a capital storm is approximately 4,600 cubic yards. The allowable flow from the proposed developed drainage areas to the existing storm drain systems totals 546 cfs. The post-development burned and bulked discharge quantities would total 120 cfs for the undeveloped drainage areas during a 50-year capital storm, and the calculated total debris volume during a capital storm is approximately 1,960 cubic yards. The design flow from the developed drainage areas to the existing storm drain system totals 545 cfs.

There would be a reduction of 70 cfs (37 percent reduction) in burned and bulked discharge (i.e., transport of sediment and debris) included from the tributary watersheds, specific to the subject site, under post-development conditions. This reduction in discharge would be the result of the developed portions of the subject site proposed to be covered with impervious surfaces and non-erodible vegetation. It would also largely be the result of the proposed and existing debris basins that would capture sediment and debris in upstream runoff and allow debris to settle out from the runoff before it would discharge into the existing storm drain system. With these improvements in place, the proposed project would reduce runoff flow rates through the subject site and into San Francisquito Creek.

Over-irrigation of landscaped areas, especially when combined with the use of chemicals, could lead to runoff that contains pesticides, herbicides, nitrates, and other contaminants. Any runoff containing high levels of nutrients (particularly fertilizers and waste products) that flows into the remaining drainages on the site could result in eutrophication (excessive nutrient buildup). This, in turn, could result in depletion of available oxygen due to increased biological oxygen demand and reduce available dissolved oxygen for aquatic organisms. Other chemicals, pesticides, and herbicides could also adversely affect aquatic systems. The proposed private residences and the parks could contribute to the runoff into on-site drainages.

Over-irrigation of landscaped areas and the resulting potential for urban runoff, can result in changes to the habitat in the ephemeral streams into which the runoff would discharge. Storm water and other runoff from the project site will generally be directed into the existing Phase A storm drain system that discharges into San Francisquito Creek in two locations, approximately ¼ mile north and south of Copper Hill Drive. Urban runoff that discharges from the outlet structure north of Copper Hill Drive has encouraged the establishment of approximately 0.51 acre of Fremont cottonwood trees and various willow trees that are characteristic of the San Francisquito Canyon area but were not present prior to the development of Phase A based on aerial photo analysis. No obvious changes to the habitat around the outlet structure south of Copper Hill Drive are evident. Additional runoff that would discharge through the outlet structure north of Copper Hill Drive may encourage further establishment of cottonwood and willow trees at the mouth of the outlet structure, but given the deep sand that characterizes the San Francisquito Creek streambed, large areas of surface water are not likely to develop that would result in conversion of habitat in this area.

There are three additional outlets along the western and southwestern boundary of the project site that would discharge storm water into natural streambed areas. Storm water would only be discharged at these locations during storm events and would not convey dry season urban runoff. There are also several slopes around the periphery of the project site. Native vegetation will be established on these slopes that will be irrigated for approximately three years until plants are established at which point, irrigation will be discontinued. Therefore, dry season runoff from these slopes may occur temporarily until native vegetation is established, but is not expected to result in the conversion of habitat in these locations.

Paved surfaces would also contribute to runoff flowing into drainages during storm events. Depending on the magnitude and frequency of storm events and the overall level of the water quality, this runoff could cause increased eutrophication; depleted oxygen levels; long-term buildup of toxic compounds and heavy metals; and other adverse effects to biological resources associated with aquatic systems.

Water quality changes resulting from the proposed project are analyzed in the water quality technical report prepared by PACE (2016). Because the overall Tesoro del Valle project was initiated prior to 1999, the project is subject to the provisions of the 1990 Los Angeles County Stormwater National Pollutant Discharge Elimination System Permit. However, the project strives to adhere to the current storm water quality management regulations that are described in the Los Angeles County Low Impact Development Standards Manual. The report concludes that total dissolved solids, total suspended solids, and chloride discharges will be reduced from the existing levels by implementation of project improvements such as debris basins and bioretention facilities. Discharges of oil, grease, phosphorus, and zinc will increase, though bioretention facilities will reduce these discharges. Levels of copper will be unchanged from current levels and lead will have a small net increase. The project will increase discharge of ammonia nitrogen and nitrate, though the levels will be well below the Total Maximum Daily Load (TMDL) for the Santa Clara River.

Since the use of chemicals and the extent of over-irrigation for landscaping cannot be determined prior to project implementation, impacts related to storm water and irrigation runoff could substantially diminish habitat for wildlife or plants occurring within the remaining drainages and substantially degrade the quality of the environment; therefore, indirect impacts resulting from landscaping irrigation and storm water runoff are potentially significant.

Sediment transport is a natural process of any river system. As stated above, the amount of solids potentially transported to San Francisquito Creek would be reduced by the project. Approximately 264 acres of land that currently drain to San Francisquito Creek are within the project development footprint. Though this will reduce the amount of sediment that would potentially flow to the creek, it is extremely small compared to the overall San Francisquito watershed upstream of the site that totals nearly 30,000 acres. Since approximately 85 percent of that watershed is in the Angeles National Forest and the project would affect less than 1 percent of the total watershed, any reduction in sediment transport from the proposed project is not considered significant.

The project would involve paving and landscaping over a smaller area as compared to the approved project. In addition, implementation of storm water and water quality improvements associated with MM 11, along with use of drought-tolerant plants to reduce urban runoff as described in MM 12 will reduce these impacts to a less than significant level. Educational material for homeowners described in MM 14 will help to reduce the potential of over-irrigation and the resulting impacts to adjacent streambeds.

6.5.7 Increase in Non-Native Species Populations

After project completion, a number of non-native plant species that are more adapted to urban environments could increase in population and displace native species because of their ability to more effectively compete for resources. It is unknown to what degree non-native plant species will displace the native species that remain on the project site or in adjacent areas; however, because the project reduces the development and landscaping footprint as compared to the approved project and use of non-native and exotic plants will be prohibited in landscaping plans, such impacts would be substantially reduced. It can be reasonably concluded that project development would result in only small increases in non-native plant populations. These plant species are often more adapted to a wider variety of growing conditions and can out-compete native plant populations for available nutrients, prime growing locations, and other resources. These species generally produce prolific quantities of seed and establish successfully in disturbed soils. Therefore, they can quickly replace many native plant populations, resulting in lower species diversity; loss of areas suitable for breeding and/or nesting by common and special status wildlife species; and overall reductions in habitat values. Though use of potentially invasive plant species will not be allowed in landscape plans, the impact on native biological resources as a result of a small increase in non-native plant species is considered potentially significant. However, the project would reduce the development footprint as compared to the approved project and implementation of MM 12 will further reduce the level of impact to less than significant.

Urban development also tends to attract wildlife species that are more typical of, and more adaptable to, urban settings, including house sparrows (*Passer domesticus*), European starlings (*Sturnus vulgaris*), rock doves (*Columba livia*), brown-headed cowbirds, American crows (*Corvus brachyrhynchos*), ravens (*Corvus corax*), striped skunks, opossum, red foxes (*Vulpes vulpes*), raccoons, and Norway rats (*Rattus norvegicus*). A number of native species are not adapted to urban development and their populations tend to decrease in the vicinity of residential or recreational developments. In addition, the increase in meso-predators (i.e., skunk, opossum, fox) in an area can also adversely impact native rodent and bird populations. Developed areas also attract non-native Argentine ants (*Linepithema humile*) due to the high soil moisture from irrigation. These ants have the potential to negatively impact native ant populations, which serve

as secondary pollinators and seed dispersers of many native flower species. The impact on native biological resources as a result of increased non-native animal species is considered potentially significant. MM 13 will reduce this impact to a level considered less than significant. Educational material for homeowners described in MM 14 will help to reduce the impacts of non-native plants and wildlife.

6.5.8 Construction and Grading Activities

Construction and grading activities may result in the following impacts: direct deposition of fill as well as siltation and erosion into creek drainages; excessive dust accumulation on vegetation that could result in the degradation or loss of some plant species; and soil compaction around remaining trees. The effects of construction activity will be reduced through the implementation of MM 15. Construction impacts to native habitat~~These impacts~~, either permanent or temporary, are considered significant. Implementation of MMs 1, 2, 7, and 8 will reduce these impacts to less than significant.

Indirect impacts to oak trees within or bordering the proposed development area could occur if machinery occurs within the dripline of these oaks during construction and grading activities, though the Oak Tree Survey Report identifies one oak tree that may be affected by such encroachment. These impacts are considered significant. MM 2 will reduce this impact to a level considered less than significant.

6.6 CONSISTENCY WITH THE APPROVED ENVIRONMENTAL IMPACT REPORT

As discussed above, the currently proposed project impact footprint represents a 45 percent reduction in grading impacts (718.30 acres in approved 1999 design versus 393.60 acres for current proposed design). Overall, impacts to biological resources on the project site are similarly reduced. A comparison of the currently proposed project's impacts versus the originally proposed project is provided in Table 9.

TABLE 9
COMPARISON OF IMPACTS TO VEGETATION TYPES

Vegetation Type/Other Area	1999 Impacts (acres)	2017 Impacts (acres)	Difference (acres)
Native Vegetation Types			
alluvial scrub (<i>Lepidospartum squamatum</i> Alliance)	0.00	0.00	0.00
blue elderberry scrub (<i>Sambucus nigra</i> Alliance)	11.80	8.69	-3.11
chamise chaparral (<i>Adenostoma fasciculatum</i> Alliance)	177.60	73.74	-103.86
chamise chaparral–annual grassland (<i>Adenostoma fasciculatum</i> Alliance)	0.00	12.52	+12.52
chamise chaparral–sage scrub (<i>Adenostoma fasciculatum</i> – <i>Salvia mellifera</i> Alliance)	188.10	173.10	-15.00
coast live oak woodland (<i>Quercus agrifolia</i> Alliance)	1.20	0.23	-0.97
coast live oak woodland–blue elderberry scrub (<i>Quercus agrifolia</i> – <i>Sambucus nigra</i> Alliances)	0.00	0.00	0.00
coast live oak woodland–holly-leaf cherry woodland (<i>Quercus agrifolia</i> – <i>Prunus ilicifolia</i> Alliances)	0.00	0.00	0.00
Fremont cottonwood woodland (<i>Populus fremontii</i> Alliance)	0.00	0.00	0.00
holly-leaf cherry woodland (<i>Prunus ilicifolia</i> Alliance)	10.40	0.12	-10.28
mixed chaparral–alluvial scrub–annual grassland (no Alliance)	0.00	3.56	+3.56
sage scrub (<i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Alliance)	206.10	74.00	-132.10
sage scrub–annual grassland (<i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Alliance)	43.50	20.80	-22.70
southern riparian scrub (<i>Salix lasiolepis</i> Alliance)	0.00	1.43	+1.43
Subtotal Native Vegetation Types	638.70	368.19	-270.51
Non-Native Vegetation Types			
annual grassland (<i>Bromus</i> semi-natural stands)	29.60	8.68	-20.92
ornamental	0.00	3.83	+3.83
Subtotal Non-Native Vegetation Types	29.60	12.51	-17.09
Other Areas			
disturbed–developed	50.10	12.78	-37.32
open water	0.00	0.12	+0.12
Subtotal Other Areas	50.10	12.90	-37.20
Total	718.40	437.95	-324.80

The current project footprint represents a minor increase in impacts to three native vegetation types: (1) chamise chaparral–annual grassland; (2) mixed chaparral–alluvial scrub–annual grassland; and (3) southern riparian scrub. These increased impacts are somewhat misleading because (1) chamise chaparral–annual grassland was not included as a vegetation type in the previous EIR; (2) mixed chaparral–alluvial scrub–annual grassland was previously mapped as holly-leaf cherry woodland; and (3) current southern riparian scrub impacts are the result of volunteer willow species becoming established in debris basins that were created as an interim flood-control measure during construction of Phase A. However, overall impacts are dramatically lower for several other vegetation types, including chamise chaparral, holly-leaf cherry woodland, and sage scrub.

6.6.1 Special Status Plants

The 1999 EIR for the project identified four special status plants that had the potential to occur on the project site: slender-horned spineflower (federally and State Endangered in 1999); Peirson's morning glory (a CNPS List 1B species in 1999 and a candidate for federal listing); Nevin's barberry (a CNPS List 1B species in 1999 and a candidate for federal listing); and Nevin's brickellia (*Brickellia nevinii*, a CNPS List 4 species in 1999).

Slender-horned spineflower and Nevin's barberry are both analyzed herein and have not been observed during any focused surveys on the site. Peirson's morning glory was observed regularly on the site during botanical surveys for the 1999 EIR and the current Supplemental EIR. This species is now outside the project impact boundary and its listing has been changed by CNPS from List 1B in 1999 to CRPR 4.2 currently. Nevin's brickellia was observed in San Francisquito Creek during botanical surveys in 1992 for the 1999 EIR and during 2016 botanical surveys. The species was located outside the project impact boundaries in both instances and has since been de-listed from a CNPS List 4 species to a common (i.e., not special status) species currently.

Currently, several additional special status plant species are analyzed that were not considered previously. This is likely due to changes in special status listings since the original botanical surveys were conducted in 1992 and a wider search radius for potentially occurring species. Regardless, the current analysis of project impacts on special status botanical species has been performed to the current CDFW standard and is more robust than the 1999 EIR.

6.6.2 Special Status Wildlife

The list of wildlife species that are analyzed as having potential to occur on the project site is largely the same as the biological report for the 1999 EIR. All special status species that are indicated as having potential to occur on the project site in the EIR are also analyzed herein.

6.6.3 Oak Trees

As discussed in Section 6.4.4, Oak Tree Removal Permit No. 92-074[5] was issued in 1999 and authorized the removal of 34 oak trees and encroachment within the protected zone of 60 additional oak trees. The current project footprint will require removal of 11 coast live oak trees and encroachment within the protected zone of 1 additional oak. Replacement oak trees will be planted on site in compliance with the CLAOTO.

Though oak woodland impacts were not analyzed by the *Los Angeles County Oak Woodlands Conservation Management Plan* at the time of the 1999 EIR, it is assumed that the reduction of individual oak tree removals would similarly reduce the amount of oak woodlands that are to be removed for the project. Therefore, the current oak tree impacts are less than discussed in the 1999 EIR.

6.6.4 Wildlife Movement

The 1999 EIR indicates that implementation of the proposed project would have a significant effect on the movement of wildlife through San Francisquito Canyon and through the center of the project site. The decreased project footprint proposed for the current project design would reduce these impacts by clustering development in the southern portion of the project site and preserving the northern half of the property as open space. Additionally, removing the Phase D portion of the project will prevent disruptions to wildlife movement through San Francisquito Canyon.

6.7 CUMULATIVE IMPACTS

In order to determine what the cumulative impacts of the project would be, all past, present, and probable future projects producing related or cumulative impacts in the region will be considered. The geographic area used in selecting the related projects will broadly include the northern Santa Clarita Valley, extending from the northwestern portion of the City of Santa Clarita on the south to Castaic Lake on the north, to the west of the project site to include projects generally north of Henry Mayo Drive that would have regional access via I-5, and to the east of the project site to include projects that would have local access via San Francisquito Canyon Road or other major City thoroughfares in proximity to the project site, such as Seco Canyon Road and Haskell Canyon Road.

Cumulatively, urban development eliminates and/or diminishes the quality of habitat for native flora and fauna; eliminates or causes evacuation of on-site native wildlife; often introduces non-native species; and produces potential conflict between the activities of man and the natural environment. Without mitigation, development of the proposed project would result in significant impacts to biological resources due to the loss of oak woodland, holly-leaf cherry woodland, and sage scrub vegetation types; special status plant species (club-haired mariposa lilies and slender mariposa lilies); special status wildlife species (western spadefoot and nesting raptors); oak trees; jurisdictional waters; wildlife movement and habitat fragmentation; and indirect impacts to wildlife and their foraging and breeding habitat. Although these project impacts are reduced to a level considered less than significant with mitigation and other impacts are considered less than significant without mitigation, the project will have impacts on biological resources. It is assumed that other projects in the region will have similar impacts after mitigation. The combined impact of each of these projects on the biological resources of the region is substantially adverse.

The project would contribute incrementally to the cumulative loss of biological resources in the Santa Clarita Valley region. Particularly impacted resources include upland and riparian vegetation communities, oak trees, special status plant and wildlife species, wildlife habitat and movement, and jurisdictional waters. However, the increment of increase in these impacts that is contributed by the proposed project is minimal relative to the whole of the cumulative impacts of regional projects. Therefore, the cumulative impacts of the project will likely be considered adverse, but less than significant given the implementation of mitigation measures listed in Section 7.

7.0 **MITIGATION MEASURES**

This section focuses on the development of mitigation measures for those proposed project impacts that are found to be significant or potentially significant. Strategies to mitigate each impact to a level considered less than significant are identified and described.

As previously shown in detail in Table 6, a total of 880.80 acres of vegetation types and other areas on the project site will be maintained as open space (44.35 acres subject to fuel modification and 836.45 acres as undisturbed open space) to maintain biological resource values.

To ensure that the mitigation measures listed in this section are fully and properly implemented, the Project Applicant shall submit annual reports to the Los Angeles County Department of Regional Planning (LACDRP) to document post-project compliance with all mitigation measures associated with the Supplemental EIR (SEIR) for the project. These annual post-project compliance reports will summarize the success of implementing habitat-related mitigation (Mitigation Measures 1, 2, 3, and 7) and will document the status of implementing species-related mitigation (Mitigation Measures 4, 5, and 6). These reports shall also describe the general condition of open space areas and identify any impacts that require actions by the land management entity. Successful implementation of construction-related mitigation measures and mitigation related to landscaping, lighting, or homeowner activities will be discussed as these measures are implemented. Annual reports shall be submitted to the LACDRP by December 31 each year, beginning after grading activities are initiated. Annual reports shall be submitted until the monitoring periods for Mitigation Measures 1, 2, 3, 4, and 7 are complete and successful implementation of the remaining mitigation measures is documented.

7.1 **VEGETATION**

7.1.1 **Mitigation Measure 1: Special Status Vegetation Types**

The loss of chamise chaparral–sage scrub, holly-leaf cherry woodland, mixed chaparral–alluvial scrub–annual grassland, sage scrub, sage scrub–annual grassland, and southern riparian scrub on the project site is considered to be a significant impact. These vegetation types shall be preserved or restored either on site or off site in order to offset the loss of ecological functioning that would result from project implementation. Preservation or restoration shall be provided at the following minimum ratios: (1) 2:1 to mitigate the direct loss of chamise chaparral–sage scrub (346.20 acres of mitigation), holly-leaf cherry woodland (0.24 acre of mitigation), mixed chaparral–alluvial scrub–annual grassland (7.12 acres of mitigation), sage scrub (148.00 acres of mitigation), sage scrub–annual grassland (41.60 acres of mitigation), and southern riparian scrub (2.86 acres of mitigation) via grading impacts and (2) 1:1 for impacts related to vegetation thinning in fuel modification zones to chamise chaparral–sage scrub (14.78 acres of mitigation), sage scrub (6.67 acres of mitigation), and sage scrub–annual grassland (4.96 acres of mitigation). Alternatively, grading impacts to chamise chaparral–sage scrub and sage scrub–annual grassland can be mitigated at 1:1 if offset with sage scrub; and mixed chaparral–alluvial scrub–annual grassland can be mitigated at 1:1 if offset with alluvial scrub vegetation.

Off-site preservation areas that would be considered candidates to mitigate project impacts shall be located within the Santa Clara River watershed and contain habitat types similar to those that would be impacted by project implementation. If off-site habitat types are of a lower quality than the impacted habitats, the reduced ecological functioning shall be offset by preserving habitat at a ratio greater than that listed above or by enhancing/restoring ecological functioning by controlling non-native species and/or increasing native plant cover or diversity. If off-site preservation areas contain additional sensitive biological resources or other beneficial qualities (e.g., the presence of special status plant or wildlife species; biological resources that are

regionally sensitive; or local/regional importance as a wildlife corridor) the County Biologist shall have the discretion to reduce the mitigation requirements described above to account for these additional benefits. The LACDRP shall review site conditions and approve any off-site preservation areas that are proposed to mitigate the loss of on-site habitat.

Any habitat areas proposed for preservation shall be dedicated as permanent open space and preserved in perpetuity. This includes on-site habitat within the San Francisquito Canyon Area (SEA 20); on-site upland habitat outside the project development area; and any off-site habitat areas that are to be preserved to compensate for project impacts. A long-term management plan shall be prepared for all areas to be preserved that would, at a minimum, describe the following: (1) the entity responsible for implementing the management plan; (2) methods for protecting site resources (e.g., signage, fencing); (3) ongoing management activities to maintain site integrity (e.g., trash removal, non-native species control); and (4) sensitive resources that may require additional management actions. Signs that are created for open space areas shall be designed to discourage people and domestic animals from leaving trails; to identify and protect ecologically sensitive areas; and to promote public education and awareness of the native habitat. Prior to finalizing long-term management plans for open space areas, the plans shall be submitted to the LACDRP Biologist for review and approval.

If restoration is required to increase the ecological functioning of any on- or off-site areas to adequately mitigate the loss of on-site habitat, a Habitat Mitigation and Monitoring Program (HMMP) shall be implemented in accordance with a landscape palette that is approved by the LACDRP. The HMMP shall be developed by a qualified Biologist and shall be submitted for review and approval to the LACDRP prior to issuance of grading permits. The Project Applicant shall be responsible for plan implementation. Restoration shall consist of seeding and planting containers of appropriate native species. The HMMP shall be approved by the LACDRP prior to the initiation of grading activities that would impact special status vegetation types and will include the following items:

- **Responsibilities and Qualifications of the Personnel to Implement and Supervise the Plan.** The responsibilities of the Landowner, Specialists, and Maintenance Personnel that will supervise and implement the plan shall be specified.
- **Site Selection.** The site(s) for mitigation shall be determined in coordination with the Project Applicant and the LACDRP. The site shall be located in a dedicated open space area and will be contiguous with other natural open space areas.
- **Site Preparation and Planting Implementation.** Site preparation shall include (1) protection of existing native species; (2) trash and weed removal; (3) native species' salvage and reuse (i.e., duff); (4) soil treatments (i.e., imprinting, decompacting); (5) erosion-control measures (i.e., rice or willow wattles); and (6) seed mix application. The mitigation plan shall include a discussion of whether active restoration or enhancement is required to achieve the objectives of the HMMP or if passive restoration is expected to result in the desired HMMP objectives within a reasonable time frame.
- **Plant Material.** All plant material used for habitat restoration purposes shall consist of native species that are local to the immediate area of the mitigation site. The source of plant material used for habitat restoration shall come from areas within 10 miles of the mitigation site and within 1,000 feet of elevation. All plant material proposed for use in a habitat restoration program shall be inspected by a qualified biological monitor to ensure that all container plants are in good health and do not contain pests or pathogens that may be harmful to existing native plants or wildlife species. Container plants and other landscaping materials (including organic mulches) shall be inspected to ensure they do not contain Argentine ants. Any seeds to be used for habitat restoration purposes shall be collected, cleaned, stored, and packaged by a qualified seed supplier. Native seed mixes

shall be inspected by a biological monitor prior to their application to ensure that they contain the proper species and that seed packages are in good condition and do not contain any pests or pathogens. Diseased or infested plant, seed, or landscape materials shall be removed from the site and transported to an appropriate off-site green waste facility.

- **Schedule.** Establishment of restoration/revegetation sites shall be conducted between October 15 and January 30. Introduction of hydroseed mix and container plants shall occur immediately after the restoration sites are prepared.
- **Maintenance Plan/Guidelines.** The Maintenance Plan shall include (1) weed control; (2) herbivory control; (3) trash removal; (4) irrigation system maintenance; (5) maintenance training; and (6) replacement planting.
- **Monitoring Plan.** The Monitoring Plan shall include (1) qualitative monitoring (i.e., photographs and general observations); (2) quantitative monitoring (i.e., randomly placed transects); (3) monthly reports for the first year and every other month thereafter; and (4) annual reports for five years, which will be submitted to the LACDRP. Monitoring will be conducted for five years or until performance standards have been met.
- **Performance Standards.** The HMMP shall include a discussion of appropriate performance standards to determine habitat restoration success. Minimum native species coverage of approximately 90 percent relative to a nearby reference site at the end of the five-year monitoring period is a commonly utilized performance standard, though the final performance standards shall be determined based on specific site conditions. The restoration program shall be considered successful if the performance standards have been achieved at the end of the five-year monitoring period and once successful plant establishment has been documented (e.g., plant health is determined to be satisfactory by the biological monitor at least two years after supplemental watering has been discontinued). If performance standards have not been achieved at the conclusion of the five-year monitoring period, monitoring and maintenance activities shall be continued until performance standards have been met.
- **Signage and Fencing.** If necessary, the HMMP shall include specifications on fencing to protect biological resources and restrict human access. Signage specifications shall also be developed to indicate the site is a preserve area and to either indicate that trespassing is not allowed or to instruct visitors to stay on trails if public access is allowed.
- **Long-Term Site Management.** The HMMP shall identify an appropriate entity to manage any open space areas utilized for mitigation purposes. A long-term management plan shall also be developed which will be implemented by the long-term management entity. Potential land management entities include the Mountains Recreation and Conservation Authority; the Tesoro del Valle Homeowners Association; the Nature Conservancy, the City of Santa Clarita, or the County of Los Angeles. Any other management entities that may be identified would be subject to approval by the LACDRP. The County of Los Angeles shall be named as an enforcing party on any conservation easement or land dedication agreement to ensure compliance with any restrictions or required land management actions associated with the open space areas.
- **Proof of Funding for Site Management.** The HMMP shall provide a funding mechanism to ensure that sufficient funds are available to the long-term management entity for the ongoing management and protection of the mitigation sites. Possible funding mechanisms may include an endowment, payments from the HOA, or establishing a special financing district.

In addition, earth-moving equipment shall avoid maneuvering in areas outside the identified impact limits in order to avoid disturbing open space areas that will remain undeveloped. Prior to ground disturbance, the Construction Supervisor and the Project Biologist shall mark the natural open space limits. These limits shall be identified on the grading plan. Construction limits shall be flagged in the field and no earth-moving equipment shall be allowed within open space areas.

7.1.2 Mitigation Measure 2: Oak Woodland and Individual Oaks

The Oak Tree Survey Report found in Appendix J identified 11 coast live oak trees that will be removed as a result of project construction. Prior to the removal of any oak tree regulated by the County of Los Angeles Oak Tree Ordinance (CLAOTO), an oak tree removal permit shall be obtained from the County of Los Angeles. The loss of individual coast live oak trees and coast live oak woodland on the project site is considered to be a significant impact. The loss of 11 on-site coast live oak trees shall be replaced at a ratio of not less than 2:1 as required by the CLAOTO. One additional coast live oak will have its protected area encroached upon by ground-disturbance activities. This tree shall be monitored annually for a period of two years to determine if encroachment has resulted in its death. If this tree dies as a result of encroachment, it shall be mitigated in the same manner as impacted trees.

Prior to ground disturbance, orange snow fencing shall be installed around trees (five feet outside the drip line) that are in the vicinity of proposed grading limits but would not be impacted by construction. Fencing shall be in place and inspected by the Project Biologist prior to commencement of ground disturbance. This fencing shall remain in place throughout construction in the vicinity of the fenced trees until the LACDRP determines that the fences can be removed without placing the trees in jeopardy of damage from construction activities.

Individual oak tree replacement as described above shall be performed in order to offset the loss of 0.31 acre of coast live oak woodland (as defined by the Los Angeles County Oak Woodlands Management Plan). This shall be accomplished by establishing trees in on-site open space areas in the vicinity of existing oak trees. Trees shall be spaced at a distance of 30 and 60 feet to provide at least 0.62 acre of oak woodland (to provide a minimum 2:1 replacement ratio). The restoration program shall be described in a HMMP in accordance with a LACDRP-approved landscape palette. The HMMP shall be developed by a qualified Biologist and shall be submitted for review and approval to the LACDRP prior to initiating project activities that would impact oak trees and/or oak woodland resources. The Project Applicant shall be responsible for plan implementation. Restoration shall consist of seeding and planting containers of appropriate native species. The HMMP will include the following items:

- **Responsibilities and Qualifications of the Personnel to Implement and Supervise the Plan.** The responsibilities of the Landowner, Specialists, and Maintenance Personnel that would supervise and implement the Plan shall be specified.
- **Site Selection.** The mitigation site(s) shall be determined in coordination with the Project Applicant and resource agencies. The site will be located in a dedicated open space area and will be contiguous with other natural open space.

- **Site Preparation and Planting Implementation.** Site preparation shall include (1) protection of existing native species; (2) trash and weed removal; (3) native species' salvage and reuse (i.e., duff); (4) soil treatments; (5) temporary irrigation installation; (6) erosion-control measures (i.e., rice or willow wattles); (7) seed mix application to create a native understory that is comparable to the impacted oak woodland areas; and (8) planting of container plants. The mitigation plan shall include a discussion of whether active restoration or enhancement is required to create an appropriate native understory or if passive restoration may be expected allow natural establishment of a native understory within a reasonable time frame.
- **Plant Material.** All plant material used for habitat restoration purposes shall consist of native species that are local to the immediate area of the mitigation site. The source of plant material used for habitat restoration shall come from areas within 10 miles of the mitigation site and within 1,000 feet of elevation. All plant material proposed for use in a habitat restoration program shall be inspected by a qualified biological monitor to ensure that all container plants are in good health and do not contain pests or pathogens that may be harmful to existing native plants or wildlife species. Container plants and other landscaping materials (including organic mulches) shall be inspected to ensure they do not contain Argentine ants. Any seeds to be used for habitat restoration purposes shall be collected, cleaned, stored, and packaged by a qualified seed supplier. Native seed mixes shall be inspected by a biological monitor prior to their application to ensure that they contain the proper species and that seed packages are in good condition and do not contain any pests or pathogens. Diseased or infested plant, seed, or landscape materials shall be removed from the site and transported to an appropriate off-site green waste facility.
- **Schedule.** A schedule shall be developed that includes planting in late fall and early winter, between October 15 and January 30.
- **Maintenance Plan/Guidelines.** The Maintenance Plan shall include (1) weed control; (2) herbivory control; (3) trash removal; (4) irrigation system maintenance; (5) maintenance training; and (6) replacement planting.
- **Monitoring Plan.** The Monitoring Plan shall include (1) qualitative monitoring (i.e., photographs and general observations); (2) quantitative monitoring (i.e., randomly placed transects); (3) monthly reports for the first year and reports every other month thereafter; and (4) annual reports that shall be submitted to the resource agencies for three to five years. The site shall be monitored and maintained for five years or until performance standards have been met to ensure successful establishment of oak woodland.
- In addition to monitoring the replacement trees, the remaining on-site oak trees will be monitored for five years to identify any deterioration in their health. If the health of these trees deteriorates during this five-year period, the Project Biologist shall recommend measures to improve tree health or additional tree replacement at a 2:1 ratio.
- **Performance Standards.** The HMMP shall include a discussion of appropriate performance standards to determine habitat restoration success. Performance standards would consist of 100 percent survival of replacement oak trees and minimum native species coverage for oak woodland understory stratum of approximately 90 percent relative to a nearby reference site at the end of the five-year monitoring period, though the final performance standards shall be determined based on specific site conditions. The restoration program shall be considered successful if the performance standards have been achieved at the end of the five-year monitoring period and once successful plant establishment has been documented (e.g., plant health is determined to be satisfactory by the biological monitor at least two years after supplemental watering has been

discontinued). If performance standards have not been achieved at the conclusion of the five-year monitoring period, monitoring and maintenance activities shall be continued until performance standards have been met.

- **Signage and Fencing.** If necessary, the HMMP shall include specifications on fencing to protect biological resources and restrict human access. Signage specifications shall also be developed to indicate the site is a preserve area and to either indicate that trespassing is not allowed or to instruct visitors to stay on trails if public access is allowed.
- **Long-Term Site Management.** The HMMP shall identify an appropriate entity to manage any open space areas utilized for mitigation purposes. A long-term management plan shall also be developed which will be implemented by the long-term management entity. Potential land management entities include the Mountains Recreation and Conservation Authority; the Tesoro del Valle Homeowners Association; the Nature Conservancy, the City of Santa Clarita, or the County of Los Angeles. Any other management entities that may be identified would be subject to approval by the LACDRP. The County of Los Angeles shall be named as an enforcing party on any conservation easement or land dedication agreement to ensure compliance with any restrictions or required land management actions associated with the open space areas.
- **Proof of Funding for Site Management.** The HMMP shall provide a funding mechanism to ensure that sufficient funds are available to the long-term management entity for the ongoing management and protection of the mitigation sites. Possible funding mechanisms may include an endowment, payments from the HOA, or establishing a special financing district.

7.2 SPECIAL STATUS PLANT SPECIES

7.2.1 Mitigation Measure 3: Club-Haired Mariposa Lily and Slender Mariposa Lily

Mariposa lily plants observed on the project site have characteristics of both club-haired mariposa lilies and slender mariposa lilies. Due to this hybridization, it is not possible to separate these two species on the site and impacts to club-haired mariposa lily and slender mariposa lily are considered significant, but will be mitigated to a level of less than significant by the following measure.

- Prior to the initiation of grading activities that would impact mariposa lily populations that have been documented to occur inside the project impact footprint, a qualified Biologist will prepare an HMMP for review and approval by the LACDRP. The HMMP will include the following requirements:
 - a. The Project Biologist shall monitor the existing lily locations every two weeks to determine when the seeds are ready for collection. When the seeds are ripe, a qualified Seed Collector shall collect all the seeds from the plants to be impacted. The seeds shall be cleaned and stored by a qualified nursery or another institution with appropriate storage facilities.

- b. Mitigation shall consist of a combination of (1) enhancing existing mariposa lily populations via non-native vegetation control and (2) applying collected seed into dedicated open space areas on the project site that are suitable for mariposa lily establishment. Collected seed shall be installed in areas that do not currently contain mariposa lilies but are suitable for the establishment of the species. These areas generally consist of ridgelines or other areas of naturally low to moderate native plant cover, rocky soils, and low prevalence of non-native plants, especially non-native grasses. Seed will be applied in at least ten such areas that will be mapped using a GPS device and marked on the ground using flagging or staking for ongoing monitoring.
- c. The lily mitigation site shall be prepared for seeding, as detailed in the HMMP.
- d. The HMMP shall include detailed descriptions of maintenance appropriate for the site, monitoring requirements, and annual report requirements. The Project Biologist shall have the full authority to suspend any operation in the mitigation site which is, in the Biologist's opinion, not consistent with the HMMP.
- e. Performance standards shall be developed in the HMMP and approved by the LACDRP based on percent cover of non-native plant species in enhancement areas. Seed germination rates will not be a performance criterion but will be studied to determine the efficacy of seed installation to inform future mariposa lily mitigation programs.
- f. Site enhancement and monitoring activities shall be performed for a five-year period. At the conclusion of the monitoring period, the results of the seed germination study shall be provided to the LACDRP Biologist and SEATAC to inform future mitigation activities concerning the species. Monitoring activities will be continued until project performance standards are met.
- g. If necessary, the HMMP shall include specifications on fencing to protect biological resources and restrict human access. Signage specifications shall also be developed to prevent trespassing into mariposa lily areas.

The HMMP shall identify an appropriate entity to manage any open space areas utilized for mitigation purposes. A long-term management plan shall also be developed which will be implemented by the long-term management entity. Potential land management entities include the Mountains Recreation and Conservation Authority; the Tesoro del Valle Homeowners Association; the Nature Conservancy, the City of Santa Clarita, or the County of Los Angeles. Any other management entities that may be identified would be subject to approval by the LACDRP. The County of Los Angeles shall be named as an enforcing party on any conservation easement or land dedication agreement to ensure compliance with any restrictions or required land management actions associated with the open space areas.

7.3 SPECIAL STATUS WILDLIFE SPECIES

The proposed project would result in potential direct impacts on special status wildlife species with potential to occur on the project site.

7.3.1 Mitigation Measure 4: Western Spadefoot

Prior to the initiation of grading activities that would affect areas where western spadefoot have been observed, a qualified biologist shall conduct a survey for this species in habitat areas that are ~~potentially~~ suitable for breeding activity. The survey shall be conducted at the height of breeding season (February through May) to determine the presence or absence of western

spadefoot on the project site. If detected, a Western Spadefoot Mitigation Plan (WSMP) shall be developed by a qualified Biologist and submitted for review and approval by the LACDRP, in consultation with the CDFW. Generally, the WSMP will consist of (1) monitoring the presence and development of eggs and tadpoles within the project development area; (2) constructing ponds to replace the breeding habitat to be impacted; (3) relocating eggs and tadpoles from the project development area to the replacement ponds; and (4) monitoring and maintaining the replacement ponds to maintain conditions appropriate for western spadefoot breeding. Specifically, the WSMP shall include the following:

- **Responsibilities and Qualifications of the Personnel to Implement and Supervise the Plan.** The responsibilities of the Landowner, Specialists, and Maintenance Personnel that will supervise and implement the WSMP shall be specified.
- **Site Selection.** The site(s) for replacement ponds shall be determined in coordination with the Project Applicant, the LACDRP, and the CDFW. The site shall be located in a dedicated open space area, will be surrounded by native upland habitat areas that are suitable for adult spadefoot to create burrows during the summer months, and will be contiguous with other natural open space areas.
- **Pond Construction.** The mitigation plan will describe methods for constructing replacement ponds that will not allow infiltration into the soil so that water can be retained for periods long enough to allow spadefoot breeding to occur.
- **Site Preparation.** Site preparation shall include (1) protection of existing native species; (2) trash and weed removal; (3) soil treatments (i.e., compaction, placement of a restrictive layer to prevent soil infiltration).
- **Inspection of Materials.** Any plant material and other landscaping materials (including clay soil or organic mulches) shall be inspected to ensure they do not contain pests or pathogens, including Argentine ants. Diseased or infested plant, seed, or landscape materials shall be removed from the site and transported to an appropriate off-site green waste facility.
- **Schedule.** Relocation of western spadefoot eggs and tadpoles will be performed during the breeding season which generally occurs between February and May. The replacement ponds shall be monitored for a period of approximately five years during years when sufficient rainfall occurs that create appropriate breeding conditions.
- **Maintenance Plan/Guidelines.** The maintenance plan shall include (1) weed control; (2) as-needed repair to replacement ponds; and (3) trash removal.
- **Monitoring Plan.** The WSMP shall include specifications for qualitative monitoring (i.e., photographs and general observations) during the western spadefoot breeding period. The condition of the ponds shall be inspected prior to the seasonal rainy period to determine if conditions exist that would prevent appropriate water retention (e.g., gopher activity) and to recommend any needed repairs. Monitoring activities will be summarized on an annual basis and reports will be submitted to the LACDRP and CDFW each year.
- **Performance Standards.** The WSMP shall include a discussion of appropriate performance standards to determine program success. Potential performance standards may include documentation of surface water retention for sufficient periods to allow western spadefoot breeding and observation of western spadefoot eggs or tadpoles. The restoration program shall be considered successful if western spadefoot breeding is confirmed in the replacement ponds.

- **Signage and Fencing.** If necessary, the HMMP shall include specifications on fencing to protect western spadefoot areas and restrict human access. Signage specifications shall also be developed to indicate the site is a preservation site to prevent trespassing.
- **Long-Term Site Management.** The mitigation plan shall identify an appropriate entity to manage any open space areas utilized for mitigation purposes. A long-term management plan shall also be developed which will be implemented by the long-term management entity. Potential land management entities include the Mountains Recreation and Conservation Authority; the Tesoro del Valle Homeowners Association; the Nature Conservancy, the City of Santa Clarita, or the County of Los Angeles. Any other management entities that may be identified would be subject to approval by the LACDRP. The County of Los Angeles shall be named as an enforcing party on any conservation easement or land dedication agreement to ensure compliance with any restrictions or required land management actions associated with the open space areas.
- **Proof of Funding for Site Management.** The HMMP shall provide a funding mechanism to ensure that sufficient funds are available to the long-term management entity for the ongoing management and protection of the mitigation sites. Possible funding mechanisms may include an endowment, payments from the HOA, or establishing a special financing district.

7.3.2 **Mitigation Measure 5: Nesting Raptors**

If grading activities are to begin during the raptor breeding season of February 1 through June 30, a qualified Biologist shall perform a survey for any active raptor nests (common or special status) that occur within 500 feet of the project impact area. Any active nest found during survey efforts shall be mapped on the construction plans. If no active nests are found, no further mitigation is required. Results of the surveys shall be provided to the CDFW.

If nesting activity is present at any raptor nest site, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the *California Fish and Game Code*. To protect any nest site, the following restrictions on construction are required between February 1 and June 30 (or until nests are no longer active, as determined by a qualified Biologist): (1) clearing limits shall be established within a 500-foot buffer around any occupied nest or as otherwise determined by a qualified Biologist and (2) access and surveying shall be restricted within 300 feet of any occupied nest or as otherwise determined by a qualified Biologist. Any encroachment into the buffer area around the known nest shall only be allowed if a qualified Biologist determines that the proposed activity will not disturb the nest occupants. Construction during the non-nesting season can occur at the site only if a qualified Biologist has determined that fledglings have left the nest.

If an active nest is observed during the non-nesting season, the nest site shall be monitored by a qualified Biologist, and when the raptor is away from the nest, the Biologist shall flush any raptor to open space areas. The Biologist will then remove the nest site so raptors cannot return to it.

7.3.3 **Mitigation Measure 6: Burrowing Owl**

A pre-construction survey for burrowing owl shall be conducted within 14 days prior to start of construction/ground-breaking activities. A second survey will be conducted within 24 hours of any ground-breaking activities. If these surveys do not detect occupied burrowing owls, then no further mitigation is required. If burrows occupied by burrowing owls are detected on the Project site, the Applicant shall notify the CDFW and shall implement the following actions prior to construction (either Set A for breeding burrowing owls [March to July] or Set B for non-breeding burrowing owls [August to February]).

Set A Measures (for Breeding Burrowing Owls, between March and July)

- A1) No work shall occur within 500 feet of the active nesting burrow; the CDFW may be consulted to determine whether a reduced buffer is acceptable.
- A2) Provide weekly monitoring of the burrowing owl nesting burrow to determine nesting outcome.
- A3) Provide CDFW with monthly updates of burrowing owl nesting success.
- A4) Resume construction at the burrow site once the Biologist determines that fledglings have left the nest.

If burrows occupied by burrowing owls are detected within 500 feet of the Project site, the Project Biologist shall monitor the owl(s) to ensure that the project does not negatively impact breeding. If negative indirect impacts are suspected, the Project Biologist shall propose measures to reduce indirect impacts to the owl(s) during construction.

Set B Measures (for Non-Breeding Burrowing Owls, between August and February)

- B1) A qualified Biologist shall notify the CDFW of the occupied burrow location and that either passive or active relocation measures will be implemented.
- B2) The Biologist shall remove the burrow.

7.3.4 **Mitigation Measure 7: Jurisdictional Waters**

Prior to the construction of any phase or component of the proposed project that involves impacting drainages, streams, or wetlands through filling, stockpiling, conversion to a storm drain, channelization, bank stabilization, road or utility line crossings, or any other modification to a jurisdictional drainage, permits from the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and the CDFW would be required before any such activities could commence. Both permanent and temporary (construction-related) impacts are regulated and would therefore trigger the need for permits.

Regulatory permits, acquired from resource agencies in 1999, included mitigation requirements to compensate for impacts to 3.84 acres of waters under the jurisdiction of the USACE, RWQCB, and CDFW. The permits were issued to address all four phases of project impacts (Phases A through D). All mitigation requirements specified in the resource agency permits were implemented concurrent with Phase A development in an attempt to pre-mitigate impacts to jurisdictional waters associated with Phases B through D. The following mitigation activities have been performed: (1) fee payment to the U.S. Forest Service to facilitate removal of 7.68 acres of giant reed from upper San Francisquito Canyon; (2) removal of 1.11 acres of giant reed to enhance on-site portions of San Francisquito Creek; (3) installation of 12 acres of alluvial fan sage scrub revegetation in Phase D; (4) installation of one acre of willow riparian habitat; and (5) preservation of 60.2 acres within San Francisquito Canyon in Phases C and D (28.6 acres in Phase D dedicated to the MRCA in 2008, the remaining 31.6 acres in Phase C shall be dedicated prior to the initiation of grading activities for Phases B and C).

Given the reduced development footprint of the currently proposed project (versus 1999), it is possible that the resource agencies will consider the mitigation activities performed to date adequate to offset impacts associated with Phase B and C development.

If additional mitigation is required by the resource agencies to compensate for impacts to jurisdictional waters, these mitigation activities shall consist of (1) riparian habitat restoration, enhancement, or preservation or (2) participation in an agency-approved habitat mitigation bank.

If the resource agencies identify project impacts that are not adequately mitigated by the activities described above, those impacts shall be mitigated at a minimum ratio of 2:1 (i.e., no fewer than 2 acres of mitigation shall be provided for each acre of streambed loss).

The RHMP will analyze the quality and amount of streambed impact areas and will demonstrate through the use of a functional analysis method such as the California Rapid Assessment Method that the mitigation sites and activities (e.g., restoration, enhancement, and/or preservation) adequately compensate for the loss of the on-site streambed resources.

If additional mitigation activities are required by the resource agencies, the Applicant shall prepare a Riparian Habitat Mitigation Plan (RHMP) for review and approval by the LACDRP prior to the initiation of project grading activities that would affect streambed resources and will include the following items:

- **Responsibilities and Qualifications of the Personnel to Implement and Supervise the Plan.** The responsibilities of the Landowner, Specialists, and Maintenance Personnel that will supervise and implement the plan shall be specified.
- **Site Selection.** The site(s) for mitigation shall be determined in coordination with the Project Applicant and the LACDRP. The site shall be located in a dedicated open space area and will be contiguous with other natural open space areas.
- **Site Preparation and Planting Implementation.** Site preparation shall include (1) protection of existing native species; (2) trash and weed removal; (3) native species' salvage and reuse (i.e., duff); (4) soil treatments (i.e., imprinting, decompacting); (5) erosion-control measures (i.e., rice or willow wattles); and (6) seed mix application. The mitigation plan shall include a discussion of whether active restoration or enhancement is required to achieve the objectives of the RHMP or if passive restoration is expected to result in the desired RHMP objectives within a reasonable time frame.
- **Plant Material.** All plant material used for habitat restoration purposes shall consist of native species that are local to the immediate area of the mitigation site. The source of plant material used for habitat restoration shall come from areas within 10 miles of the mitigation site and within 1,000 feet of elevation. All plant material proposed for use in a habitat restoration program shall be inspected by a qualified biological monitor to ensure that all container plants are in good health and do not contain pests or pathogens that may be harmful to existing native plants or wildlife species. Container plants and other landscaping materials (including organic mulches) shall be inspected to ensure they do not contain Argentine ants. Any seeds to be used for habitat restoration purposes shall be collected, cleaned, stored, and packaged by a qualified seed supplier. Native seed mixes shall be inspected by a biological monitor prior to their application to ensure that they contain the proper species and that seed packages are in good condition and do not contain any pests or pathogens. Diseased or infested plant, seed, or landscape materials shall be removed from the site and transported to an appropriate off-site green waste facility.
- **Schedule.** Establishment of restoration/revegetation sites shall be conducted between October 15 and January 30. Introduction of hydroseed mix and container plants shall occur immediately after the restoration sites are prepared.
- **Maintenance Plan/Guidelines.** The Maintenance Plan shall include (1) weed control; (2) herbivory control; (3) trash removal; (4) irrigation system maintenance; (5) maintenance training; and (6) replacement planting.
- **Monitoring Plan.** The Monitoring Plan shall include (1) qualitative monitoring (i.e., photographs and general observations); (2) quantitative monitoring (i.e., randomly

placed transects); (3) monthly reports for the first year and every other month thereafter; and (4) annual reports for five years, which will be submitted to the LACDRP. Monitoring will be conducted for five years or until performance standards have been met.

- **Performance Standards.** The RHMP shall include a discussion of appropriate performance standards to determine habitat restoration success. Minimum native species coverage of approximately 90 percent relative to a nearby reference site at the end of the five-year monitoring period is a commonly utilized performance standard, though the final performance standards shall be determined based on specific site conditions. The restoration program shall be considered successful if the performance standards have been achieved at the end of the five-year monitoring period and once successful plant establishment has been documented (e.g., plant health is determined to be satisfactory by the biological monitor at least two years after supplemental watering has been discontinued). If performance standards have not been achieved at the conclusion of the five-year monitoring period, monitoring and maintenance activities shall be continued until performance standards have been met.
- **Signage and Fencing.** If necessary, the RHMP shall include specifications on fencing to protect biological resources and restrict human access. Signage specifications shall also be developed to indicate the site is a preservation site and to either indicate that trespassing is not allowed or to instruct visitors to stay on trails if public access is allowed.
- **Long-Term Site Management.** The RHMP shall identify an appropriate entity to manage any open space areas utilized for mitigation purposes. A long-term management plan shall also be developed which will be implemented by the long-term management entity. Potential land management entities include the Mountains Recreation and Conservation Authority; the Tesoro del Valle Homeowners Association; the Nature Conservancy, the City of Santa Clarita, or the County of Los Angeles. Any other management entities that may be identified would be subject to approval by the LACDRP. The County of Los Angeles shall be named as an enforcing party on any conservation easement or land dedication agreement to ensure compliance with any restrictions or required land management actions associated with the open space areas.
- **Proof of Funding for Site Management.** The HMMP shall provide a funding mechanism to ensure that sufficient funds are available to the long-term management entity for the ongoing management and protection of the mitigation sites. Possible funding mechanisms may include an endowment, payments from the HOA, or establishing a special financing district.

If preservation of streambed resources is proposed, the RHMP will describe (1) the amount and quality of streambed resources at the site; (2) management requirements to control invasive non-native plants, littering and illegal trash dumping, and trespassing; and (3) a mechanism for permanent preservation and management of the site. The 31.6 preservation area in Phase C shall be dedicated to an appropriate entity prior the initiation of grading activities for development of Phases C and D. A long-term management plan shall also be developed which will be implemented by one of the long-term management entities listed above. The County of Los Angeles shall be named as an enforcing party on any conservation easement or land dedication agreement to ensure compliance with any restrictions or required land management actions associated with the open space areas.

7.4 INDIRECT IMPACTS

7.4.1 Mitigation Measure 8: Increased Dust and Urban Pollutants

Prior to the issuance of a grading permit, the Project Applicant shall apply for coverage under the State Water Resources Control Board's General Permit for Storm Water Discharge Associated with Construction Activity (Construction Activities General National Pollutant Discharge Elimination System [NPDES] Permit) and shall comply with all the provisions of the permit, including the development of a Storm Water Pollution Prevention Plan, which includes provisions for the implementation of Best Management Practices and erosion-control measures. Best Management Practices shall include both structural and non-structural measures. The purpose of this mitigation measure is to ensure that site runoff does not adversely affect the Santa Clara River Significant Ecological Area (SEA) No. 20, or downstream biological resources.

7.4.2 Mitigation Measure 9: Night Lighting

Prior to issuance of a building permit, the Project Applicant shall develop a Lighting Plan in coordination with a qualified Biologist and an Electrical Engineer registered in the State of California for development areas that border natural open space resources. The Lighting Plan shall be subject to the Rural Outdoor Lighting District requirements (County of Los Angeles 2014) to ensure that all lighting has a minimal impact on open space areas and wildlife. Mercury vapor and halide lighting shall not be used on the perimeter of the developed areas or in areas that are, nor shall it be adjacent to designated open space. The Lighting Plan shall provide guidelines for outdoor lighting used throughout the project site. Final lighting orientation and design shall be approved by the County of Los Angeles, Department of Building and Safety. The Lighting Plan shall include, but not be limited to, the following stipulations:

- a. Illumination levels shall be compatible with the character and use of surrounding development. The Lighting Plan shall incorporate outdoor lighting recommendations developed by the , as determined by national lighting organizations. The Illuminating Engineering Society of North America publishes recommendations for the lighting industry that include illumination levels for outdoor lighting.
- b. Low-pressure sodium lighting fixtures or flashing lights shall not be used.
- c. Exterior lighting standards and fixtures shall be located and designed to minimize direct glare beyond the site boundaries. Lighting shall be fully shielded and directed downward to confine light spread solely within necessary locations. Illumination or glare from the exterior lighting system onto adjacent properties or streets shall be minimized.
- d. Security lighting fixtures shall not project above the roof line of the building on which they are mounted.
- e. Where applicable, time-control devices shall be used on exterior lighting sources.

The Lighting Plan shall be submitted and approved by the LACDRP prior to issuance of building permits. Lighting requirements described in this mitigation measure shall be memorialized in the Codes, Covenants, and Restrictions (CC&Rs) for the project to ensure ongoing compliance.

7.4.3 Mitigation Measure 10: Human Activity

Prior to issuance of a building permit, the Project Applicant shall ensure the incorporation of fencing into the Landscaping Plan to deter project occupants from entering the natural areas. The Landscaping Plan shall include provisions for signs and split-rail fencing to direct residents to keep out of sensitive natural open space and revegetation and/or mitigation areas. In areas

bordering natural open space and fuel-modification zones, the Landscape Plan shall reflect a transition zone designed to buffer natural habitats from developed areas. This transition zone will reduce impacts associated with invasion by introduced species and will help buffer human activity adjacent to wildlife habitat. Landscaping in areas adjacent to natural open space will use species native to the project region and will be consistent with guidelines from the Los Angeles County Fire Authority. The Landscaping Plan shall be submitted to the Los Angeles County Fire Department and LACDRP for review and approval prior to issuance of a building permit.

Only passive recreational activities shall be permitted within the designated natural open space areas and shall be restricted to trails. The ~~Codes, Covenants, and Restrictions (CC&Rs)~~ for the project shall require that all dogs and cats are in compliance with requirements found in Sections 10.20.150 through 10.20.350 of the Los Angeles County Code. These requirements include appropriate licensing and tagging of dogs and cats; that all dogs are on leashes while in the designated natural open space areas; that all dogs and cats are neutered or spayed; and that all dogs and cats have a microchip. Dispensers for dog waste bags shall be placed along sidewalks and trail heads. Additionally, all trails should include signage citing applicable CC&Rs to inform users that all dogs must be on leashes and that owners must clean up after their dogs.

Waste and recycling receptacles that discourage foraging by wildlife species adapted to urban environments shall be installed by the Project Applicant in common areas (i.e., any area where public trash receptacles would be placed) such as parks, sidewalks, community centers, and walking trails throughout the project site.

7.4.4 Mitigation Measure 11: Landscaping Irrigation and Storm Water Runoff

Prior to the issuance of a grading permit, the Project Applicant shall prepare and submit to the County a Storm Water Pollution Prevention Plan (SWPPP). The plan shall demonstrate that proposed water catchments and filtration structures will be sufficient to trap and remove pollutants and urban sediments to the degree necessary to ensure continued water quality. The SWPPP shall also demonstrate the project's compliance with Los Angeles RWQCB standards, which shall also be the performance standard for this measure. The general purposes of the plan shall be to protect and enhance water quality; to support the designated beneficial water uses; and to protect the functions and values of water quality resources (e.g., streams, wetlands, open space), which include, but are not limited to the following:

- a. Providing a vegetated corridor to protect water features from development.
- b. Maintaining and rehabilitating natural stream corridors and other protected water features.
- c. Minimizing sediment, nutrient, and pollutant loading into water.
- d. Providing filtration, infiltration, and natural water purification.
- e. Stabilizing slopes to prevent landslides, which contribute to sedimentation of water features.
- f. Maintaining the existing tree canopy where possible.
- g. Minimizing impervious surfaces while providing for compact growth.

Implementation of MM 11 would reduce potential impacts to biological resources resulting from landscaping, irrigation, and storm water related activities to a less than significant level.

7.4.5 **Mitigation Measure 12: Populations of Non-Native Plant Species**

Prior to the issuance of a building permit, the Project Applicant shall prepare a Landscaping Plan. This plan will be subject to County review and will include a plant palette composed of non-invasive species that are adapted to the conditions found on the project site and that do not require high irrigation rates. Slopes that are on the periphery of the project site will be planted with native species, while slopes on the interior of the site will be planted with drought-tolerant plants. Drought tolerant plants that do not become naturalized will be used in all fuel modification areas. During the preparation of the Landscaping Plan, the Landscape Architect shall consult with the Project Biologist to identify plant species that may be toxic to animals so that use of these species can be avoided. The Landscaping Plan will also include a list of invasive plant species prohibited from being planted on the project site. Invasive plant species to be prohibited and recommended drought-tolerant plants for resident landscaping shall be memorialized in the project's CC&Rs.

~~The Homeowners Association shall supply future residents with educational materials that discourage the use of invasive plant species for individual home landscaping while promoting the use of drought tolerant landscaping. Specific invasive plant species that are commonly used in landscaped areas will be indicated for avoidance to prevent their spread into adjacent habitat areas. Preferred drought tolerant plant species will be recommended for efficient use of water by individual homeowners.~~

Implementation of MM 12 would reduce potential indirect impacts from non-native plant species to a less than significant level.

7.4.6 **Mitigation Measure 13: Populations of Non-Native Wildlife Species**

~~The Homeowners Association shall supply an educational pamphlet to future residents of the project site regarding the importance of not feeding wildlife; information stating that trash (containing food) is not accessible to wildlife; the necessity of keeping the ground free of fallen fruit from trees; instructions about not leaving pet food outside; instructions to not transport firewood to prevent the introduction of pests and pathogens that can kill or damage native trees; and admonitions to allow cats to go outside to prevent them from killing birds and falling prey to coyotes.~~

All landscaping materials (including organic mulches) for common areas (i.e., parks and intervening, unpaved areas that are not a part of any home owners parcel) shall be inspected and certified by landscape suppliers as being "free" of Argentine ants prior to planting. Additionally, to further guard against Argentine ants, the Homeowner's Association shall discourage irrigated landscape planting through distribution of educational information and other feasible methods to reduce the potential for importing Argentine ants. Planted slopes adjacent to native habitat areas shall be planted with drought-resistant plants and soil moisture shall be maintained below approximately ten percent saturation to deter the establishment of nesting colonies of Argentine ants. Mitigation Measure 13 would reduce the magnitude of potential impacts from non-native and urban adapted wildlife species population increases to a less than significant level.

7.4.7 **Mitigation Measure 14: Homeowner Educational Materials**

The Homeowners Association shall make educational materials available to all residents either through the distribution of supply an educational book/pamphlet and/or development of a website. Topics to be discussed in these materials shall include: to future residents of the project site regarding the importance of not feeding wildlife; preventing wildlife access to information stating that trash that (containing food) is not accessible to wildlife; the necessity of keeping the ground free of fallen fruit from trees; instructions about not leaving pet food outside; instructions to not

transport firewood to prevent the introduction of pests and pathogens that can kill or damage native trees; and admonitions to ~~against allowing~~ cats to go outside to prevent them from killing birds and falling prey to coyotes; discouraging use of invasive plant species; creating landscaped areas that support native wildlife; and identifying ways to reduce urban runoff and maintaining water quality. A recommended resource for development of these educational materials can be found at: <http://www.livinglightly.org>.

The Homeowners Association shall supply future residents with educational materials that discourage the use of invasive plant species for individual home landscaping while promoting the use of drought tolerant landscaping. Specific invasive plant species that are commonly used in landscaped areas will be indicated for avoidance to prevent their spread into adjacent habitat areas. Preferred drought tolerant plant species will be recommended for efficient use of water by individual homeowners.

7.4.77.4.8 Mitigation Measure 1415: Construction and Grading Activities

Prior to the issuance of a grading permit, the Project Applicant shall submit the proposed Best Management Practices (BMPs) for County review. Measures shall be included to control siltation and erosion into creek drainages; dewatering of drainages by filling and diverting headwaters of drainages; and excessive dust accumulation on vegetation. BMPs shall also specify the use of silt fencing at the lower edges of graded slopes and the outer edges of drainage buffers and shall require that coir logs be placed on slopes to prevent erosion.

All oak tree driplines within 50 feet of land clearing (including brush clearing) or areas to be graded shall be enclosed within temporary fencing for the duration of the clearing or grading activities. Fencing shall extend to the root protection zone (RPZ) (that area at least 15 feet from the trunk or half again as large as the distance from the trunk to the dripline, whichever is greater). No parking or storage of equipment, solvents, or chemicals that could adversely affect the trees shall be allowed within 25 feet of the trunk at any time. Fence removal shall occur only after the Project Biologist confirms the health of preserved trees.

All upslope grading and drainage shall be engineered to minimize resultant erosion, soil compaction, or drainage into preserved oak tree areas. Whenever possible, utilities shall be designed to avoid crossing under the canopies of preserved trees unless the utilities are installed by drilling under the root zones (where feasible) to avoid impacts associated with cutting roots. Feasibility of drilling under trees will be based on soil conditions. Utilities will be clustered whenever possible to lessen impacts to oak RPZs.

Implementation of MM 14 would reduce potential indirect impacts resulting from construction and grading to a less than significant level.

7.5 BEST MANAGEMENT PRACTICES

7.5.1 Construction Noise

The most noise-intensive portions of construction (grubbing and, to the maximum extent practicable, mass grading) shall be conducted during the non-nesting bird season (i.e., July 1 to January 31 for raptor species and September 16 to March 14 for non-raptors) to avoid disturbing nesting by special status bird species. If construction cannot be avoided during this time period, construction shall be limited in the vicinity of nests as described above in MM 5.

7.6 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of the mitigation measures listed above will mitigate biological resource impacts to a level that is considered less than significant.

7.7 CUMULATIVE IMPACTS

Implementation of all the mitigation measures described above would substantially reduce the impacts of the proposed project and cumulative impacts. However, the indirect effects to plant and wildlife species resulting from the increase in human activities, especially vehicular traffic and exotic plant species, remains cumulatively significant and no feasible mitigation is available. Therefore, no additional measures are proposed to specifically address cumulative impacts.

7.8 CONSISTENCY WITH THE APPROVED ENVIRONMENTAL IMPACT REPORT

The 1999 EIR included several Mitigation Measures to reduce project impacts to a less than significant level. Several of these MMs have closely related MMs in this document, including (1) impacts to special status vegetation types (riparian vegetation, holly-leaf cherry woodland, coastal sage scrub, and alluvial fan sage scrub); (2) preservation of open space; (3) impacts to nesting raptors; (4) impacts to jurisdictional waters; (5) impacts to coast live oak resources; and (6) impacts to wildlife movement. Mitigation measures provided herein provide the same amount of mitigation or more than what is discussed in the 1999 EIR.

The 1999 EIR analyzed all four phases of the project (A through D) together. Since Phase A has been developed and Phase D is no longer part of the proposed project, the 1999 EIR includes four additional mitigation measures that are not pertinent to the current project. These include the following:

- **Protection of Unarmored Threespine Stickleback:** Phase A included bank stabilization along San Francisquito Creek, which had the potential to affect this species. The current design does not affect San Francisquito Creek and therefore this MM no longer applies.
- **Impacts to Peirson's Morning Glory:** The original project would have impacted at least one population of this species. Documented locations of this species do not occur within the current reduced project impact footprint. Since no impacts will result, mitigation is unnecessary.
- **Impacts to Special Status Reptiles:** The 1999 EIR included an MM that required a catch-and-release program to reduce mortality on the coast horned lizard and the coastal whiptail. This program was implemented for Phase A construction, but resulted in the capture of very few whiptail individuals. This program is described in the MM as experimental and unproven. Given the lack of individuals that were captured, this effort was determined to be ineffective and is not currently included as a MM.
- **Impacts to Significant Ecological Area 20:** The 1999 EIR required a 50-foot buffer along San Francisquito Creek as well as signage and fencing to protect the area. This MM was pertinent to Phase A construction, but the current project limits are not near the SEA. Therefore, this MM is not pertinent to the current project.

8.0 **PROJECT COMPATIBILITY WITH THE SIGNIFICANT ECOLOGICAL AREA**

The *County of Los Angeles General Plan* specifies “design compatibility criteria” for projects proposed within or partially within a designated SEA. All projects within or partially within a designated SEA should be designed as follows:

- to be highly compatible with the biotic resources present;
- to maintain water bodies, water courses, and their tributaries in a natural state;
- so that wildlife movement corridors (migratory paths) are left in a natural and undisturbed state;
- so the development retains sufficient natural vegetative cover and/or open space to buffer critical resource areas from the proposed use;
- so that, where necessary, fences or walls are provided to buffer important habitat areas from development; and
- so roads and utilities serving the proposed development are located so as not to conflict with critical resources, habitat areas, or migratory paths.

San Francisquito Canyon is part of the Santa Clara River SEA No. 20. A portion of this SEA is located in the northeast corner of the project site in Phase C. Much of the SEA that occurs in Phase D has been dedicated to the Mountains Recreation and Conservation Authority (MRCA) as part of Phase A development. The portion of the SEA in Phase C will also be dedicated to the MRCA prior to the initiation of grading activities, as required by conditions in the USACE and CDFW permits for the project.

This SEA will not be directly affected by the project. Since the SEA is approximately 0.75 mile from the northern grading limits, the project is not expected to have any indirect impacts on the SEA either. A north-south ridgeline separates the project impact footprint from the SEA, so that water in the development area will drain to the south and west, not eastward to the SEA. As a result, the proposed project will not affect the hydrology of the SEA. Given the distance from the development area to the SEA, indirect impacts discussed in Section 6 (e.g., lighting, human use, landscape irrigation, construction noise, and dust) are not expected to affect the SEA. The *County of Los Angeles General Plan* originally characterized SEAs as areas that contain unique, dwindling, or other rare plant and animal resources that needed to be preserved for the purpose of public education, research, and other non-disruptive outdoor uses; it is not expected that the proposed project would conflict with these goals.

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APPENDIX A
LIST OF PARCELS AND ACREAGES

SUMMARY OF PARCELS ON THE PROJECT SITE

Assessor's Parcel Number	Acres
3244-160-017	27.56
3244-160-018	22.45
3244-160-019	32.15
3244-160-020	21.01
3244-160-021	3.54
3244-160-022	37.9
3244-160-023	21.81
3244-160-024	11.29
3244-160-025	35.03
3244-161-001	40.69
3244-161-002	27.28
3244-161-003	0.61
3244-161-004	1.39
3244-161-005	37.49
3244-161-006	32.44
3244-161-007	26.81
3244-161-008	11.22
3244-161-009	28.26
3244-161-010	0.37
3244-161-011	44.49
3244-161-012	0.6
3244-161-013	23.71
3244-161-014	0.51
3244-161-015	5.52
3244-161-016	13.17
3244-161-017	9.64
3244-161-018	31.15
3244-161-019	2.78
3244-161-020	3.47
3244-161-021	44.98
3244-161-022	0.58
3244-161-023	38.87
3244-162-001	24.14
3244-162-002	41.92
3244-162-003	56.39
3244-162-004	32.82
3244-162-005	24.52
3244-162-006	28.96
3244-163-003	34.16
3244-163-004	37.37
3244-163-005	43.34
3244-163-006	52.55
3244-163-007	31.34

SUMMARY OF PARCELS ON THE PROJECT SITE

Assessor's Parcel Number	Acres
3244-164-001	27.76
3244-164-002	33.25
3244-164-003	11.65
3244-164-004	36.59
3244-164-005	26.74
3244-164-006	6.76
3244-164-007	27.27
3244-164-008	29.17
3244-164-009	25.93
Total	1271.40

APPENDIX B
SITE PHOTOGRAPHS

APPENDIX C
SURVEY SUMMARIES

SUMMARY OF BIOLOGICAL SURVEYS

Survey Type	Year Conducted	Company	Staff	Appendix
Focused Botanical Surveys and Vegetation Mapping	2016	Psomas	Jonathan Aguayo, Trevor Bristle, Ian Cain, Katie Gallagher, Cristhian Mace, Steve Norton, Courtney Rose, Allison Rudalevige, Sarah Thomas, Jonas Winbolt, Jordan Zylstra, Lindsay Messett, and Sandy Leatherman (Leatherman BioConsulting, Inc.)	Appendix E-1
Special Status Plant Surveys	2011	BonTerra Consulting	Robert Allen, Richard Lewis, Andrea Edwards, Jennifer Pareti, David Hughes, Rebecca Tyra, Cristhian Mace, Jonathan Aguayo, Pam De Vries (Consulting Biologist)	Appendix E-2
Special Status Plant Surveys	2005	BonTerra Consulting	Pam De Vries, David Hughes, Amber O'Neal, Jennifer Pareti, Stacie Tennant, Andrea Warniment, Travis Cooper, and Michael Couffer	Appendix E-3
Focused Survey for Special Status Fish Species	2005	BonTerra Consulting	Dr. Jonathan Baskin and Dr. Thomas Haglund (San Marino Environmental Associates)	Appendix F
Focused Survey for Western Spadefoot Toad	2005	BonTerra Consulting	Mike Robson, Samuel Stewart, and Jeff Wheeler	Appendix G
Focused Survey for Coastal California Gnatcatcher	2015	Psomas	Jonathan Aguayo, Brian Leatherman (Leatherman Bioconsulting, Inc.), and Adam De Luna (Leatherman Bioconsulting, Inc.)	Appendix H-1
Focused Survey for Coastal California Gnatcatcher	2008	BonTerra Consulting	Michael Couffer (Consulting Biologist) and Amber O'Neal	Appendix H-2
Focused Survey for Coastal California Gnatcatcher	2005	BonTerra Consulting	Michael Couffer and Dana Kamada (Consulting Biologists)	Appendix H-3
Western Burrowing Owl Habitat Assessment and Focused Burrow Survey	2007	BonTerra Consulting	Michael Couffer (Consulting Biologist)	Appendix I
Oak Tree Survey	2016	Psomas	David Hughes and Trevor Bristle	Appendix J
Oak Tree Survey	2010	BonTerra Consulting	Andrea Edwards, Jeff Crain, and David Hughes	Not included
Oak Tree Survey	1994	Sapphos Environmental	Melissa Howe, Ann Johnston, and Marie Campbell	Not included

SUMMARY OF BIOLOGICAL SURVEYS

Survey Type	Year Conducted	Company	Staff	Appendix
		Michael Brandman Associates		
Oak Tree Survey	1992	Michael Brandman Associates	Melissa Howe	Not included
Delineation of Jurisdictional Waters	2016	Psomas	David Hughes	Appendix K
Delineation of Jurisdictional Waters	2007	BonTerra Consulting	Gary Medeiros, Kai Palenscar, and Weena Sangkatavat	Not included
Delineation of Jurisdictional Waters	1999	BonTerra Consulting EIP Associates	Regulatory Specialist from EIP and Biologist from BonTerra Consulting	Not included

APPENDIX D

PLANT AND WILDLIFE COMPENDIA

TABLE D-1
COMPENDIUM OF PLANT SPECIES OBSERVED ON THE PROJECT SITE

Species	
Scientific Name	Common Name
LYCOPHYTES	
SELAGINELLACEAE - SPIKE-MOSS FAMILY	
<i>Selaginella bigelovii</i>	bushy spike-moss
FERNS	
PTERIDACEAE - BRAKE FAMILY	
<i>Pellaea andromedifolia</i>	coffee cliff-brake
EUDICOTS	
ADOXACEAE - MUSKROOT FAMILY	
<i>Sambucus nigra</i> ssp. <i>caerulea</i>	blue elderberry
ANACARDIACEAE - SUMAC FAMILY	
<i>Malosma laurina</i>	laurel sumac
<i>Rhus aromatica</i>	skunk bush
<i>Rhus ovata</i>	sugar bush
<i>Schinus molle</i> *	Peruvian pepper tree
APIACEAE - CARROT FAMILY	
<i>Apiastrum angustifolium</i>	narrow-leaved apiastrum
<i>Lomatium dasycarpum</i> ssp. <i>dasycarpum</i>	woolly fruit lomatium
ASTERACEAE - SUNFLOWER FAMILY	
<i>Acourtia microcephala</i>	small-headed acourtia
<i>Ambrosia acanthicarpa</i>	annual bur-sage
<i>Ambrosia psilostachya</i>	western ragweed
<i>Artemisia californica</i>	California sagebrush
<i>Artemisia tridentata</i>	big sagebrush
<i>Baccharis pilularis</i> ssp. <i>consanguinea</i>	coyote brush
<i>Baccharis salicifolia</i> ssp. <i>salicifolia</i>	mule fat
<i>Brickellia nevinii</i>	Nevin's brickellbush
<i>Centaurea benedicta</i> *	blessed starthistle
<i>Centaurea melitensis</i> *	toocalote
<i>Chaenactis glabriuscula</i> var. <i>glabriuscula</i>	yellow pincushion
<i>Corethrogyne filaginifolia</i>	common sand aster
<i>Deinandra fasciculata</i>	fascicled tarplant
<i>Encelia actoni</i>	Acton encelia
<i>Encelia californica</i>	California encelia
<i>Encelia farinosa</i>	brittlebush
<i>Ericameria nauseosa</i>	rubber rabbitbrush
<i>Ericameria palmeri</i> var. <i>pachylepis</i>	thickbracted goldenbush
<i>Erigeron foliosus</i>	leafy daisy
<i>Eriophyllum confertiflorum</i> var. <i>confertiflorum</i>	golden woolly sunflower
<i>Gutierrezia californica</i>	California matchweed
<i>Hazardia squarrosa</i>	saw toothed goldenbush
<i>Helianthus gracilentus</i>	slender sunflower
<i>Heterotheca grandiflora</i>	telegraph weed
<i>Heterotheca sessiliflora</i> ssp. <i>echioides</i>	viper's sessileflower false goldenaster

TABLE D-1
COMPENDIUM OF PLANT SPECIES OBSERVED ON THE PROJECT SITE

Species	
Scientific Name	Common Name
<i>Hypochaeris glabra</i> *	smooth cat's-ear
<i>Isocoma menziesii</i>	coastal goldenbush
<i>Lepidospartum squamatum</i>	California scale-broom
<i>Leptosyne bigelovii</i>	bigelow's tickseed
<i>Logfia filaginoides</i>	California cottonrose
<i>Logfia gallica</i> *	french cottonrose
<i>Malacothrix saxatilis</i> var. <i>tenuifolia</i>	slender leaf cliff desert dandelion
<i>Matricaria discoidea</i> *	pineapple weed
<i>Pseudognaphalium beneolens</i>	fragrant everlansting
<i>Pseudognaphalium californicum</i>	California everlasting
<i>Pseudognaphalium canescens</i>	hairy everlasting
<i>Psilocarphus tenellus</i>	slender woolly-marbles
<i>Rafinesquia californica</i>	California chicory
<i>Senecio flaccidus</i>	threadleaf ragwort
<i>Sonchus asper</i> ssp. <i>asper</i> *	prickly sow thistle
<i>Sonchus oleraceus</i> *	common sow thistle
<i>Stephanomeria exigua</i>	small wire-lettuce
<i>Stephanomeria virgata</i>	rod wire-lettuce
<i>Tetradymia comosa</i>	tufted cottonthorn
<i>Uropappus lindleyi</i>	Lindley's silverpuffs
BORAGINACEAE - BORAGE FAMILY	
<i>Amsinckia intermedia</i>	common fiddleneck
<i>Cryptantha intermedia</i>	common cryptantha
<i>Cryptantha muricata</i>	pointed cryptantha
<i>Cryptantha nevadensis</i> var. <i>rigida</i>	rigid cryptantha
<i>Emmenanthe penduliflora</i>	whispering bells
<i>Eriodictyon crassifolium</i>	thickleaf yerba santa
<i>Eucrypta chrysanthemifolia</i>	spotted hideseed
<i>Harpagonella palmeri</i>	Palmer's grapplinghook
<i>Heliotropium curassavicum</i> var. <i>oculatum</i>	alkali heliotrope
<i>Pectocarya linearis</i> ssp. <i>ferocula</i>	narrow-toothed pectocarya
<i>Pectocarya setosa</i>	round-nut pectocarya
<i>Phacelia cicutaria</i>	caterpillar phacelia
<i>Phacelia distans</i>	wild heliotrope phacelia
<i>Phacelia minor</i>	wild canterbury bells
<i>Phacelia parryi</i>	Parry's phacelia
<i>Phacelia viscida</i> var. <i>viscida</i>	sticky phacelia
BRASSICACEAE - MUSTARD FAMILY	
<i>Brassica tournefortii</i> *	Sahara mustard
<i>Hirschfeldia incana</i> *	shortpod mustard
<i>Lepidium virginicum</i> ssp. <i>virginicum</i>	Virginia pepper-grass
<i>Sisymbrium altissimum</i> *	tumble mustard
<i>Sisymbrium irio</i> *	London rocket

TABLE D-1
COMPENDIUM OF PLANT SPECIES OBSERVED ON THE PROJECT SITE

Species	
Scientific Name	Common Name
<i>Sisymbrium orientale</i> *	indian hedgemustard
<i>Stanleya pinnata</i> var. <i>pinnata</i>	desert prince's plume
<i>Thysanocarpus laciniatus</i>	notch fringe-pod
CACTACEAE - CACTUS FAMILY	
<i>Opuntia basilaris</i> var. <i>basilaris</i>	beavertail cactus
CAPRIFOLIACEAE - HONEYSUCKLE FAMILY	
<i>Lonicera</i> sp.	honeysuckle
CHENOPODIACEAE - GOOSEFOOT FAMILY	
<i>Atriplex canescens</i>	four-wing saltbush
<i>Chenopodium album</i> *	lamb's quarters
<i>Chenopodium californicum</i>	California goosefoot
<i>Salsola tragus</i> *	prickly Russian thistle
CONVOLVULACEAE - MORNING-GLORY FAMILY	
<i>Calystegia macrostegia</i>	coast morning-glory
<i>Calystegia peirsonii</i>	Peirson's morning-glory
<i>Cuscuta californica</i> var. <i>californica</i>	chaparral dodder
CRASSULACEAE - STONECROP FAMILY	
<i>Crassula connata</i>	pygmyweed
<i>Dudleya lanceolata</i>	lance-leaved dudleya
CUCURBITACEAE - GOURD FAMILY	
<i>Cucurbita foetidissima</i>	calabazilla
<i>Marah macrocarpa</i>	large fruit wild cucumber
ERICACEAE - HEATH FAMILY	
<i>Arctostaphylos glauca</i>	big berry manzanita
EUPHORBIACEAE - SPURGE FAMILY	
<i>Croton setiger</i>	turkey-mullein
<i>Euphorbia albomarginata</i>	white margin spurge
<i>Euphorbia polycarpa</i>	many seed spurge
<i>Stillingia linearifolia</i>	thin leaf toothleaf
FABACEAE - LEGUME FAMILY	
<i>Acmispon glaber</i> var. <i>glaber</i>	glabrous deerweed
<i>Acmispon strigosus</i>	strigose deervetch
<i>Astragalus trichopodus</i> var. <i>phoxus</i>	hairy fruit compressed milkvetch
<i>Caesalpinia spinosa</i> *	tara
<i>Lupinus bicolor</i>	miniature lupine
<i>Lupinus concinnus</i>	bajada lupine
<i>Lupinus excubitus</i>	grape soda lupine
<i>Lupinus hirsutissimus</i>	stinging lupine
<i>Lupinus truncatus</i>	cut leaf lupine
<i>Melilotus indicus</i> *	indian sweetclover
FAGACEAE - OAK FAMILY	
<i>Quercus agrifolia</i>	coast live oak

TABLE D-1
COMPENDIUM OF PLANT SPECIES OBSERVED ON THE PROJECT SITE

Species	
Scientific Name	Common Name
GERANIACEAE - GERANIUM FAMILY	
<i>Erodium botrys</i> *	longbeak filaree
<i>Erodium cicutarium</i> *	redstem filaree
LAMIACEAE - MINT FAMILY	
<i>Marrubium vulgare</i> *	horehound
<i>Salvia apiana</i>	white sage
<i>Salvia columbariae</i>	chia
<i>Salvia leucophylla</i>	purple sage
<i>Salvia mellifera</i>	black sage
<i>Trichostema lanatum</i>	woolly blue curls
LOASACEAE - BLAZING STAR FAMILY	
<i>Mentzelia laevicaulis</i>	smooth stem blazing star
<i>Mentzelia micrantha</i>	San Luis blazing star
MALVACEAE - MALLOW FAMILY	
<i>Malacothamnus fremontii</i>	fremont's bush-mallow
<i>Malva parviflora</i> *	cheeseweed
MONTIACEAE - MINER'S-LETTUCE FAMILY	
<i>Claytonia perfoliata</i> ssp. <i>perfoliata</i>	round leaf miner's lettuce
NYCTAGINACEAE - FOUR O'CLOCK FAMILY	
<i>Mirabilis laevis</i> var. <i>crassifolia</i>	coastal wishbone plant
ONAGRACEAE - EVENING PRIMROSE FAMILY	
<i>Camissonia campestris</i>	Mojave suncup
<i>Camissoniopsis ignota</i>	glowing suncup
<i>Eulobus californicus</i>	false-mustard
OROBANCHACEAE - BROOM-RAPE FAMILY	
<i>Castilleja exserta</i>	purple owl's clover
PAEONIACEAE - PEONY FAMILY	
<i>Paeonia californica</i>	California peony
PAPAVERACEAE - POPPY FAMILY	
<i>Argemone munita</i>	chicalote
<i>Dendromecon rigida</i>	bush poppy
<i>Eschscholzia californica</i>	California poppy
PHRYMACEAE - LOPSEED FAMILY	
<i>Mimulus aurantiacus</i> var. <i>pubescens</i>	hairy bush monkeyflower
<i>Mimulus brevipes</i>	widethroat yellow monkeyflower
PLANTAGINACEAE - PLANTAIN FAMILY	
<i>Antirrhinum coulterianum</i>	Coulter's snapdragon
<i>Plantago erecta</i>	dot seed plantain
<i>Veronica anagallis-aquatica</i> *	water speedwell
PLATANACEAE - SYCAMORE FAMILY	
<i>Platanus racemosa</i>	western sycamore
POLEMONIACEAE - PHLOX FAMILY	
<i>Gilia brecciarum</i> ssp. <i>brecciarum</i>	break gilia

**TABLE D-1
COMPENDIUM OF PLANT SPECIES OBSERVED ON THE PROJECT SITE**

Species	
Scientific Name	Common Name
<i>Gilia capitata</i>	ball gilia
POLYGONACEAE - BUCKWHEAT FAMILY	
<i>Chorizanthe staticoides</i>	statice spineflower
<i>Chorizanthe xanti</i> var. <i>xanti</i>	Xantus' spineflower
<i>Eriogonum elongatum</i> var. <i>elongatum</i>	longstem buckwheat
<i>Eriogonum fasciculatum</i> var. <i>foliolosum</i>	leafy California buckwheat
<i>Eriogonum gracile</i> var. <i>gracile</i>	slender woolly buckwheat
<i>Pterostegia drymarioides</i>	granny's hairnet
RHAMNACEAE - BUCKTHORN FAMILY	
<i>Ceanothus crassifolius</i>	hoaryleaf ceanothus
<i>Ceanothus cuneatus</i> var. <i>cuneatus</i>	buckbrush
<i>Rhamnus crocea</i>	spiny redberry
<i>Rhamnus ilicifolia</i>	hollyleaf redberry
ROSACEAE - ROSE FAMILY	
<i>Adenostoma fasciculatum</i>	chamise
<i>Cercocarpus betuloides</i>	birch-leaf mountain mahogany
<i>Heteromeles arbutifolia</i>	toyon
<i>Prunus ilicifolia</i>	holly leaf cherry
RUBIACEAE - COFFEE FAMILY	
<i>Galium angustifolium</i> ssp. <i>angustifolium</i>	narrow leaved bedstraw
SALICACEAE - WILLOW FAMILY	
<i>Populus fremontii</i> ssp. <i>fremontii</i>	Fremont cottonwood
<i>Salix exigua</i> var. <i>hindsiana</i>	Hinds' willow
<i>Salix gooddingii</i>	Goodding's black willow
<i>Salix laevigata</i>	red willow
<i>Salix lasiolepis</i>	arroyo willow
SCROPHULARIACEAE - FIGWORT FAMILY	
<i>Verbascum virgatum</i> *	wand mullein
SOLANACEAE - NIGHTSHADE FAMILY	
<i>Datura wrightii</i>	Wright's jimsonweed
<i>Nicotiana attenuata</i>	coyote tobacco
<i>Nicotiana glauca</i> *	tree tobacco
<i>Solanum xanti</i>	chaparral nightshade
TAMARICACEAE - TAMARISK FAMILY	
<i>Tamarix ramosissima</i> *	saltcedar
MONOCOTS	
AGAVACEAE - AGAVE FAMILY	
<i>Chlorogalum pomeridianum</i>	wavyleaf soap plant
<i>Hesperoyucca whipplei</i>	chaparral yucca
LILIACEAE - LILY FAMILY	
<i>Calochortus clavatus</i> var. <i>clavatus</i>	club-haired mariposa lily
<i>Calochortus clavatus</i> var. <i>gracilis</i>	slender mariposa lily
<i>Calochortus venustus</i>	Butterfly mariposa lily

TABLE D-1
COMPENDIUM OF PLANT SPECIES OBSERVED ON THE PROJECT SITE

Species	
Scientific Name	Common Name
POACEAE - GRASS FAMILY	
<i>Aristida purpurea</i>	purple threeawn
<i>Arundo donax</i> *	giant reed
<i>Avena barbata</i> *	slender wild oat
<i>Avena fatua</i> *	wild oat
<i>Bromus diandrus</i> *	ripgut brome
<i>Bromus hordeaceus</i> *	soft brome
<i>Bromus madritensis</i> ssp. <i>rubens</i> *	red brome
<i>Cynodon dactylon</i> *	bermuda grass
<i>Distichlis spicata</i>	salt grass
<i>Elymus condensatus</i>	giant wildrye
<i>Festuca myuros</i> *	rattail fescue
<i>Hordeum murinum</i> ssp. <i>leporinum</i> *	hare barley
<i>Melica imperfecta</i>	coast range onion grass
<i>Muhlenbergia microsperma</i>	littleseed muhly
<i>Pennisetum setaceum</i> *	African fountain grass
<i>Poa secunda</i>	one-sided blue grass
<i>Polypogon interruptus</i> *	ditch beard grass
<i>Polypogon monspeliensis</i> *	rabbit foot beard grass
<i>Schismus barbatus</i> *	Mediterranean schismus
<i>Stipa coronata</i>	crested needle grass
<i>Stipa lepida</i>	foothill needle grass
<i>Stipa miliacea</i> var. <i>miliacea</i> *	smilo grass
THEMIDACEAE - BRODIAEA FAMILY	
<i>Bloomeria crocea</i> var. <i>crocea</i>	common goldenstar
<i>Dichelostemma capitatum</i>	blue dicks
TYPHACEAE - CATTAIL FAMILY	
<i>Typha latifolia</i>	broad-leaved cattail
* non-native species	

TABLE D-2
COMPENDIUM OF WILDLIFE SPECIES OBSERVED ON THE PROJECT SITE

Species		Special Status
Scientific Name	Common Name	
AMPHIBIANS		
RANIDAE - TRUE FROG FAMILY		
<i>Lithobates catesbeianus</i> *	American bullfrog	
HYLIDAE - TREEFROG FAMILY		
<i>Pseudacris cadaverina</i>	California treefrog	
LIZARDS		
PHRYNOSOMATIDAE - SPINY LIZARD FAMILY		
<i>Phrynosoma blainvillii</i>	Blainville's horned lizard	SSC
<i>Sceloporus occidentalis</i>	western fence lizard	
<i>Uta stansburiana elegans</i>	western side-blotched lizard	
TEIIDAE - WHIPTAIL LIZARD FAMILY		
<i>Aspidoscelis tigris tigris</i>	great basin whiptail	
SNAKES		
COLUBRIDAE - COLUBRID SNAKE FAMILY		
<i>Pituophis catenifer</i>	gophersnake	
BIRDS		
ANATIDAE - SWAN, GOOSE, AND DUCK FAMILY		
<i>Anas platyrhynchos</i>	mallard	
ODONTOPHORIDAE - NEW WORLD QUAIL FAMILY		
<i>Callipepla californica</i>	California quail	
ARDEIDAE - HERON FAMILY		
<i>Ardea herodias</i>	great blue heron	
CATHARTIDAE - NEW WORLD VULTURE FAMILY		
<i>Cathartes aura</i>	turkey vulture	
ACCIPITRIDAE - HAWK FAMILY		
<i>Buteo jamaicensis</i>	red-tailed hawk	
CHARADRIIDAE - PLOVER FAMILY		
<i>Charadrius vociferus</i>	killdeer	
COLUMBIDAE - PIGEON AND DOVE FAMILY		
<i>Patagioenas fasciata</i>	band-tailed pigeon	
<i>Streptopelia decaocto</i> *	Eurasian collared-dove	
<i>Zenaida macroura</i>	mourning dove	
CUCULIDAE - CUCKOO AND ROADRUNNER FAMILY		
<i>Geococcyx californianus</i>	greater roadrunner	
CAPRIMULGIDAE - GOATSUCKER FAMILY		
<i>Chordeiles acutipennis</i>	lesser nighthawk	
<i>Phalaenoptilus nuttallii</i>	common poorwill	
APODIDAE - SWIFT FAMILY		
<i>Chaetura vauxi</i>	Vaux's swift	SSC
<i>Aeronautes saxatalis</i>	white-throated swift	
TROCHILIDAE - HUMMINGBIRD FAMILY		
<i>Archilochus alexandri</i>	black-chinned hummingbird	
<i>Calypte anna</i>	Anna's hummingbird	

TABLE D-2
COMPENDIUM OF WILDLIFE SPECIES OBSERVED ON THE PROJECT SITE

Species		Special Status
Scientific Name	Common Name	
<i>Calypte costae</i>	Costa's hummingbird	
<i>Selasphorus sasin</i>	Allen's hummingbird	
PICIDAE - WOODPECKER FAMILY		
<i>Melanerpes formicivorus</i>	acorn woodpecker	
<i>Picoides nuttallii</i>	Nuttall's woodpecker	
FALCONIDAE - FALCON FAMILY		
<i>Falco sparverius</i>	American kestrel	
TYRANNIDAE - TYRANT FLYCATCHER FAMILY		
<i>Contopus cooperi</i>	olive-sided flycatcher	SSC
<i>Contopus sordidulus</i>	western wood-pewee	
<i>Empidonax traillii</i>	willow flycatcher	SE
<i>Empidonax difficilis</i>	Pacific-slope flycatcher	
<i>Sayornis nigricans</i>	black phoebe	
<i>Sayornis saya</i>	Say's phoebe	
<i>Myiarchus cinerascens</i>	ash-throated flycatcher	
<i>Tyrannus vociferans</i>	Cassin's kingbird	
<i>Tyrannus verticalis</i>	western kingbird	
LANIIDAE - SHRIKE FAMILY		
<i>Lanius ludovicianus</i>	loggerhead shrike	SSC
VIREONIDAE - VIREO FAMILY		
<i>Vireo gilvus</i>	warbling vireo	
CORVIDAE - JAY AND CROW FAMILY		
<i>Aphelocoma californica</i>	western scrub-jay	
<i>Corvus brachyrhynchos</i>	American crow	
<i>Corvus corax</i>	common raven	
HIRUNDINIDAE - SWALLOW FAMILY		
<i>Stelgidopteryx serripennis</i>	northern rough-winged swallow	
<i>Petrochelidon pyrrhonota</i>	cliff swallow	
<i>Hirundo rustica</i>	barn swallow	
PARIDAE - TITMOUSE FAMILY		
<i>Baeolophus inornatus</i>	oak titmouse	
AEGITHALIDAE - BUSHTIT FAMILY		
<i>Psaltirparus minimus</i>	bushtit	
TROGLODYTIDAE - WREN FAMILY		
<i>Salpinctes obsoletus</i>	rock wren	
<i>Thryomanes bewickii</i>	Bewick's wren	
POLIOPTILIDAE - GNATCATCHER FAMILY		
<i>Polioptila caerulea</i>	blue-gray gnatcatcher	
<i>Polioptila californica</i>	California gnatcatcher	FT, SSC
SYLVIIDAE - SILVIID WARBLERS FAMILY		
<i>Chamaea fasciata</i>	wrentit	
TURDIDAE - THRUSH FAMILY		
<i>Sialia mexicana</i>	western bluebird	

TABLE D-2
COMPENDIUM OF WILDLIFE SPECIES OBSERVED ON THE PROJECT SITE

Species		Special Status
Scientific Name	Common Name	
<i>Catharus ustulatus</i>	Swainson's thrush	
<i>Turdus migratorius</i>	American robin	
MIMIDAE - MOCKINGBIRD AND THRASHER FAMILY		
<i>Toxostoma redivivum</i>	California thrasher	
<i>Mimus polyglottos</i>	northern mockingbird	
STURNIDAE - STARLING FAMILY		
<i>Sturnus vulgaris*</i>	European starling	
BOMBYCILLIDAE - WAXWING FAMILY		
<i>Bombycilla cedrorum</i>	cedar waxwing	
PTILOGONATIDAE - SILKY-FLYCATCHER FAMILY		
<i>Phainopepla nitens</i>	phainopepla	
PARULIDAE - WOOD-WARBLER FAMILY		
<i>Oreothypis celata</i>	orange-crowned warbler	
<i>Oreothypis ruficapilla</i>	Nashville warbler	
<i>Setophaga petechia</i>	yellow warbler	SSC
<i>Setophaga coronata</i>	yellow-rumped warbler	
<i>Setophaga nigrescens</i>	black-throated gray warbler	
<i>Setophaga townsendi</i>	Townsend's warbler	
<i>Setophaga occidentalis</i>	hermit warbler	
<i>Cardellina pusilla</i>	Wilson's warbler	
EMBERIZIDAE - SPARROW FAMILY		
<i>Pipilo maculatus</i>	spotted towhee	
<i>Aimophila ruficeps</i>	rufous-crowned sparrow	
<i>Melospiza crissalis</i>	California towhee	
<i>Chondestes grammacus</i>	lark sparrow	
<i>Artemisospiza belli</i>	Bell's sage sparrow	
<i>Melospiza melodia</i>	song sparrow	
CARDINALIDAE - CARDINALS, GROSBEAKS AND ALLIES FAMILY		
<i>Piranga ludoviciana</i>	western tanager	
<i>Pheucticus melanocephalus</i>	black-headed grosbeak	
ICTERIDAE - BLACKBIRD, COWBIRD AND ORIOLE FAMILY		
<i>Agelaius phoeniceus</i>	red-winged blackbird	
<i>Sturnella neglecta</i>	western meadowlark	
<i>Euphagus cyanocephalus</i>	Brewer's blackbird	
<i>Icterus cucullatus</i>	hooded oriole	
<i>Icterus bullockii</i>	Bullock's oriole	
FRINGILLIDAE - FINCH FAMILY		
<i>Haemorhous mexicanus</i>	house finch	
<i>Carduelis psaltria</i>	lesser goldfinch	
<i>Carduelis lawrencei</i>	Lawrence's goldfinch	
MAMMALS		
LEPORIDAE - HARE AND RABBIT FAMILY		
<i>Sylvilagus audubonii</i>	desert cottontail	

**TABLE D-2
COMPENDIUM OF WILDLIFE SPECIES OBSERVED ON THE PROJECT SITE**

Species		Special Status
Scientific Name	Common Name	
<i>Sylvilagus bachmani</i>	brush rabbit	
<i>Lepus californicus</i>	black-tailed jackrabbit	
SCIURIDAE - SQUIRREL FAMILY		
<i>Otospermophilus beecheyi</i>	California ground squirrel	
MURIDAE - MOUSE, RAT, AND VOLE FAMILY		
<i>Peromyscus maniculatus</i>	deer mouse	
<i>Neotoma fuscipes</i>	dusky-footed woodrat	
CANIDAE - CANID FAMILY		
<i>Canis latrans</i>	coyote	
CERVIDAE - CERVID FAMILY		
<i>Odocoileus hemionus</i>	southern mule deer	
Special Status Federal (USFWS) State (CDFW) FT Threatened SE Endangered SSC Species of Special Concern * non-native species		

APPENDIX E

PLANT FOCUSED SURVEY REPORTS (2016, 2011, AND 2005)

APPENDIX F

SPECIAL STATUS FISH FOCUSED SURVEY REPORT (2005)

APPENDIX G

WESTERN SPADEFOOT FOCUSED SURVEY REPORT (2005)

APPENDIX H

COASTAL CALIFORNIA GNATCATCHER FOCUSED SURVEY REPORTS (2015, 2008, AND 2005)

APPENDIX I

BURROWING OWL FOCUSED SURVEY REPORT (2007)

APPENDIX J

OAK TREE SURVEY REPORT

APPENDIX K
JURISDICTIONAL DELINEATION REPORT